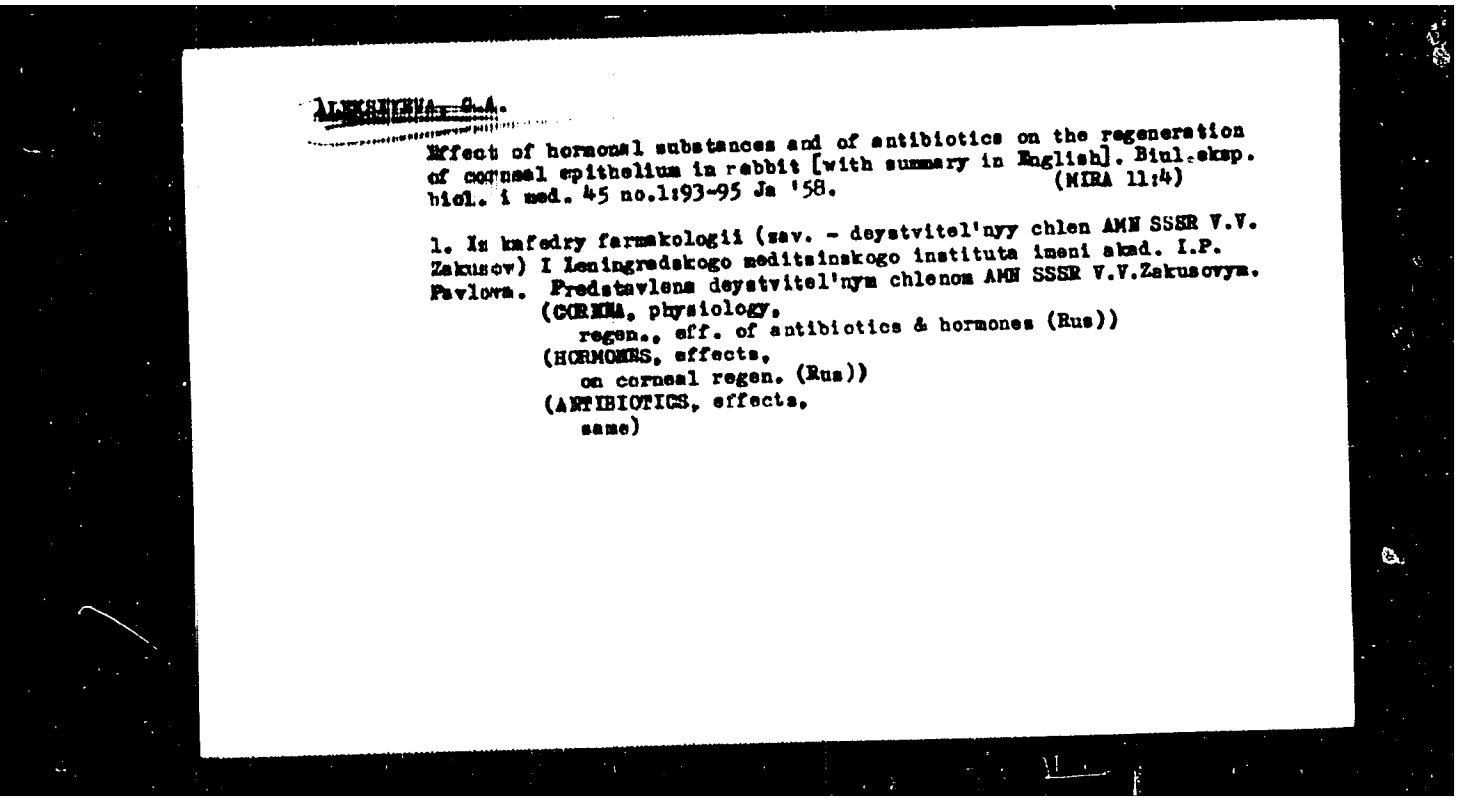
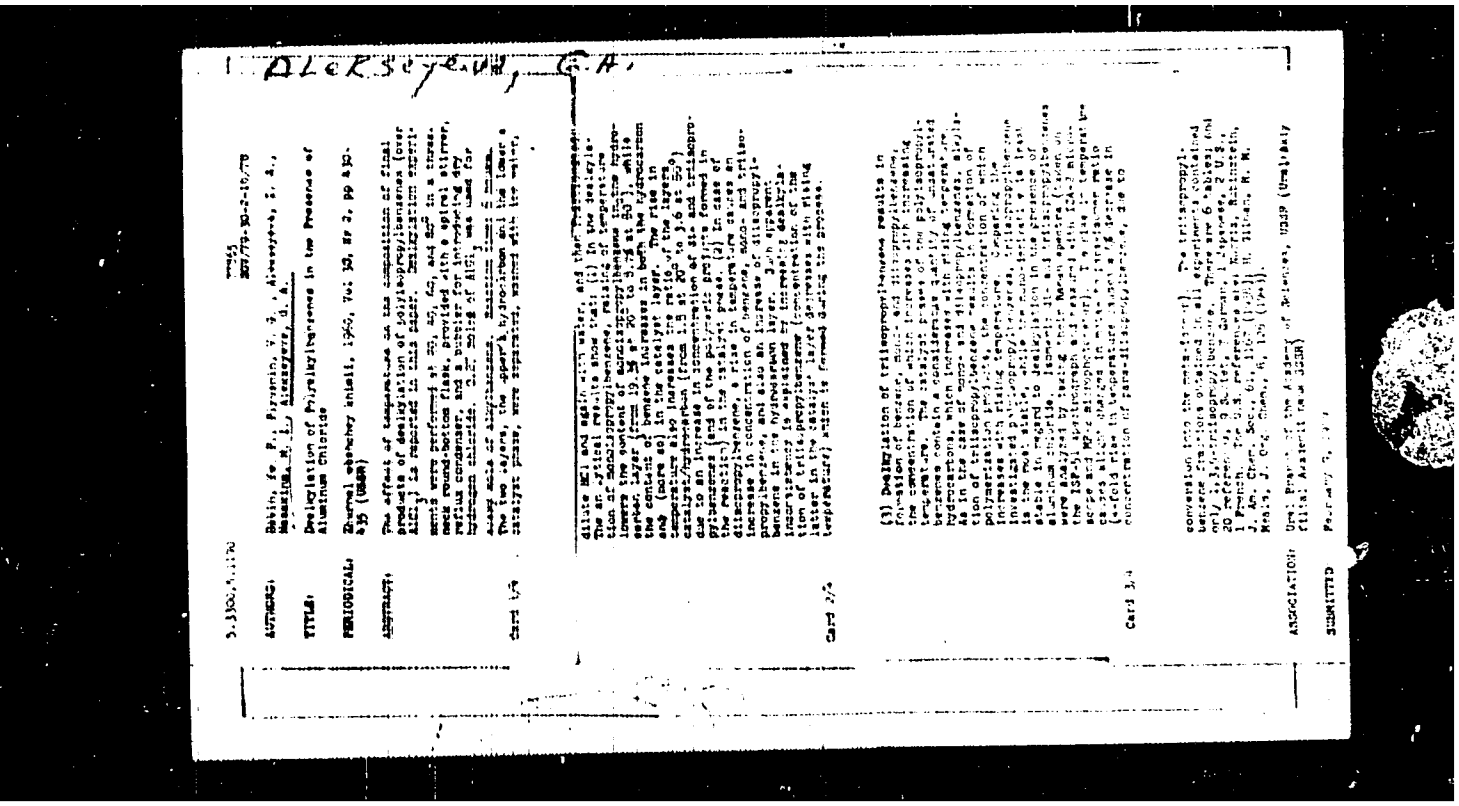
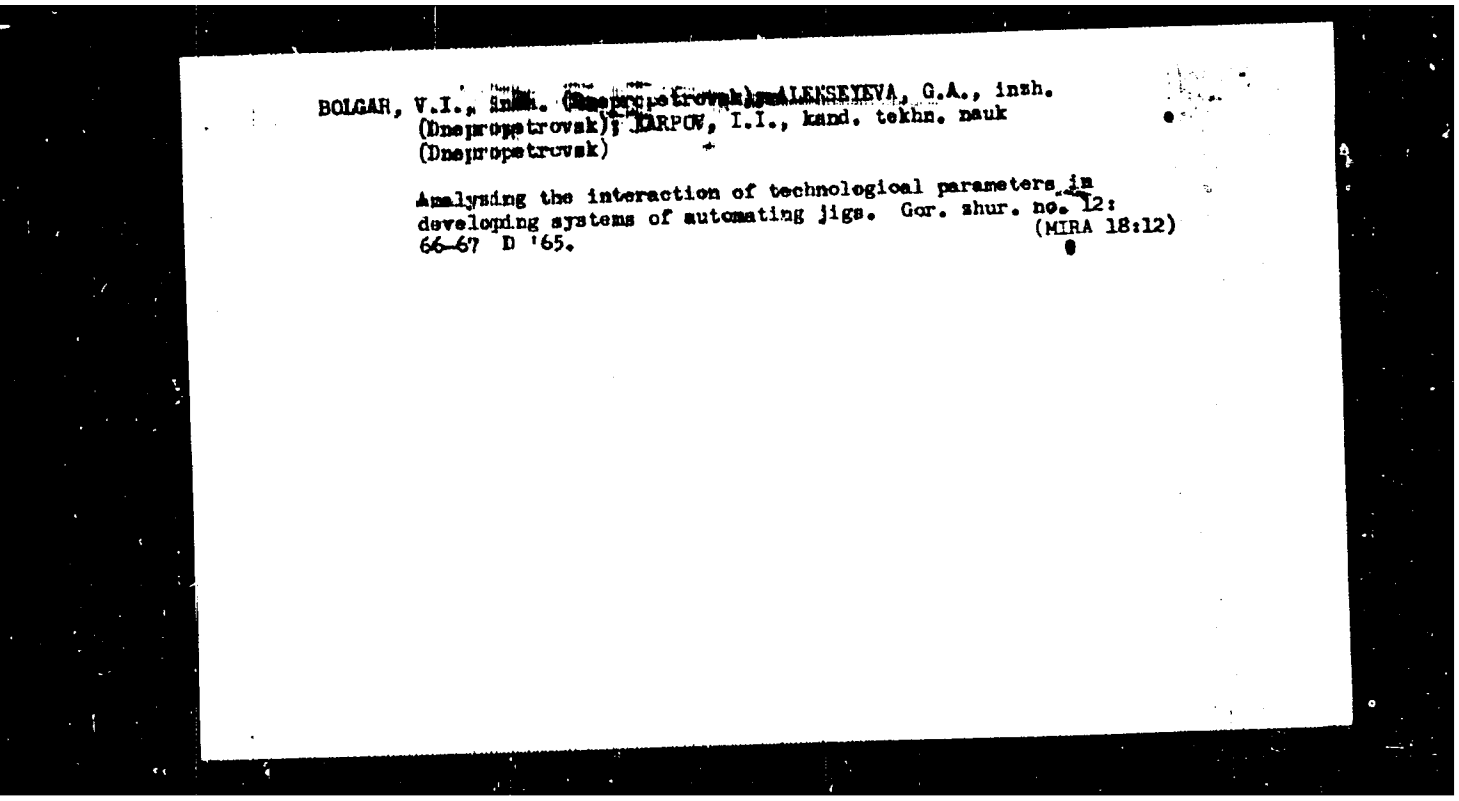


ALEKSEYEVA, O.A.

Effect of hormonal substances and of antibiotics on the regeneration of corneal epithelium in rabbit [with summary in English]. Biul.eksp. biol. i med. 45 no.1:93-95 Ja '58. (MIRA 11:4)

1. Iz kafedry farmakologii (zav. - deystvitel'nyy chlen AMN SSSR V.V. Zakusov) I Leningradskogo meditsinskogo instituta imeni akad. I.P. Pavlova. Predstavlena deystvitel'nym chlenom AMN SSSR V.V.Zakusovym.
(CORNEA, physiology,
regen., eff. of antibiotics & hormones (Rus))
(HORMONES, effects,
on corneal regen. (Rus))
(ANTIBIOTICS, effects,
same)





BOLGAR, V.I., inzh. (Dnepropetrovsk); ALEKSEYEVA, G.A., insh. (Dnepropetrovsk); KARPOV, I.I., kand. tekhn. nauk (Dnepropetrovsk)

Analysing the interaction of technological parameters in developing systems of automating jigs. Gor. shur. no. 12: 66-67 D '65. (MIRA 18:12)

80224

S/076/60/034/04/04/042
B010/B009

5.3200
5.3100

AUTHORS: Alekseyeva, I. A., Plyusnin, V. G., Babin, Ye. P., Alekseyeva, G.A. (Sverdlovsk)

TITLE: Laws Governing the Substitution of Alkyl Groups for the Hydrogen Atoms in the Benzene Ring. VIII. Orientation of the Alkyl Groups in the Catalytic Alkylation of Benzene With Acid Catalysts

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 4, pp. 726-733

TEXT: The investigation results quoted in various publications concerning the compositions of di- and polyalkyl benzenes (obtained with various catalysts) show that a higher percentage of 1,3-dialkylbenzenes may, for instance, be obtained by means of $AlCl_3$ and $FeCl_3$. Since alkyl groups preferably attach to the 1,2- and 1,4-positions in the aromatic ring, this is an "abnormal" phenomenon, which has not yet been explained. In the present paper benzene and isopropylbenzene were alkylated with propylene on kieselguhr in the presence of $AlCl_3$, HF, H_2SO_4, and H_3PO_4. The working methods have already been described (Refs. 11, 12), working conditions are given in Table 1. The catalyzates were

Card 1/3

Laws Governing the Substitution of Alkyl Groups for the Hydrogen Atoms in the Benzene Ring. VIII. Orientation of the Alkyl Groups in the Catalytic Alkylation of Benzene With Acid Catalysts

fractionated in narrow fractions whose Raman spectra were investigated by means of an ISP-51 spectrograph (Tables 2,3, results). The spectra of the mono- and diisopropylbenzenes were determined by means of the spectra of pure compounds (produced by the Komissiya po spektroskopii Akademii nauk SSSR (Commission of Spectroscopy of the Academy of Sciences USSR)). The diisopropylbenzene fraction of the catalyzate obtained by means of $AlCl_3$ contained, under the particular experimental conditions, the two isomers 1,3- and 1,4-diisopropylbenzene, the former being produced in larger quantities than the latter. Three isomers are obtained with the catalysts HF and H_2SO_4, namely almost equal amounts of the 1,3- and 1,4-isomers and much less of the 1,2-isomer. The catalyzate obtained with the phosphorus catalyst also contained all three isomers (predominantly 1,3-diisopropylbenzene). It was found that in the course of the dealkylation of the mono- and diisopropylbenzenes an equilibrium of the isomers in the diisopropyl fraction comes about in accordance with the ratio 1,3-isomer : 1,4-isomer = 3 : 1. With $AlCl_3$ only 1,3,5-triisopropylbenzene forms, while the main reaction product in the case of HF and H_2SO_4 is

80224

Laws Governing the Substitution of Alkyl Groups for the Hydrogen Atoms in the Benzene Ring. VIII. Orientation of the Alkyl Groups in the Catalytic Alkylation of Benzene With Acid Catalysts

S/076/60/034/04/04/042
B010/B009

1,2,4-triisopropylbenzene. For the first time, the Raman spectra of the 1,3,5- and 1,2,4-triisopropylbenzenes are given. They are, however, only tentative qualitative data since the purity of the substances obtained did not yet meet standard requirements. Papers by A. V. Topchiyev and P.G.Sergeyev are mentioned in the text. There are 3 tables and 17 references, 9 of which are Soviet.

ASSOCIATION: Ural'skiy filial AN SSSR Institut khimii (Urals Branch of the AS USSR Institute of Chemistry)

SUBMITTED: April 25, 1957

Card 3/3

KUVALDINA, O.A.; ALEKSEYEVA, G.G.

Myocardial infarcts under conditions of the Far North.
Sov. Med. 26 no.9:96-100 S '62. (MIRA 17:4)

1. Iz terapevticheskogo otdeleniya (zav. G.G. Alekseyeva) Murmanskoy oblastnoy bol'nitsy.

ALEKSEYEVA, O.I.; TSEYTLIN, A.A., kandidat tekhnicheskikh nauk, redaktor; BUYEK, N.P., tekhnicheskiy redaktor.

[Masonry work of slag cement blocks] Kladka iz shlakobetonnykh kamnei. Kiev, Gos.izd-vo tekhn. lit-ry USSR, 1953. 78 p.[Microfilm] (MLRA 7:10)

[Slag cement) (Hollow brick, tile, etc.) (Masonry)

ALEKSEYEVA, G.I. [Alekseieva, H.I.], inzh.; LUK'YANENKO, Yu.D. [Luk'ianenko, IU.D.], inzh.

New equipment for construction. Nauka i zhyttia 8 no.8:53-55 Ag '58. (MIRA 12:1)
(Construction industry--Equipment and supplies)

S/032/62/028/002/007/037
B101/B110

AUTHORS: Rudinov, L. P., and Alekseyeva, G. I.

TITLE: Determination of metallic zirconium and its low chlorides

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 2, 1962, 165 - 166

TEXT: The analysis of the cathodic precipitate formed in the electrolytic production of Zr from salt melts is described. Metallic Zr is determined on the basis of the reaction of Zr with HF by measuring the liberated H_2. A device suggested by S. F. Belov, D. N. Ivanova (Zavodskaya laboratoriya, v. 22, no. 12, 1414 (1956)) was used. The weighed portion is dissolved in 10% HCl. When the liberation of hydrogen has come to an end, a 2-2.5-fold NaF excess is added, and H_2 liberated now is measured. The zirconium content, x, is calculated from: $x = 0.2036\ ak/d$. a = volume of eliminated H_2, ml; k = coefficient of reduction of the H_2 volume to standard temperature and pressure; d = weighed portion, g. The error was 1.9% with a confidence probability of 0.95. $ZrCl_2$ and $ZrCl_3$ are

Card 1/2

Determination of metallic zirconium...

determined on the basis of their reaction with H_2O, H_2 also being liberated. The content y of $ZrCl_2$ is calculated from y = 0.407 ak/d (% by weight), the content of $ZrCl_3$ from z = 0.814 ak/d. If both chlorides are present, the following holds: y = (0.814 ak - Cd)/d; z = (2Cd - 0.814 ak)/d, C being the overall concentration of Zr determined by any method. If the sample at the same time contains $ZrCl_4$, the method cannot be applied. Reduction of $ZrCl_4$ to $ZrCl_3$ by alkali metal resulted in 88.6; 90.6% of $ZrCl_2$ with a theoretical content of 89.8%; reduction of $ZrCl_4$ to $ZrCl_3$ by Zr resulted in 35.6; 36.1% of $ZrCl_3$ with a theoretical content of 34.7%. There are 3 Soviet references.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut redkometallicheskoy promyshlennosti (State Design and Planning Scientific Research Institute of the Rare Metals Industry)

ALEKSEYEVA, G. I.

Alekseyeva, G. I. "The effect of relative humidity of the air on nitrogen exchange and the blood chart in young hogs", Sbornik po zooteknii i parazitologii, Tashkent, 1948, pp. 34-41, - Bibliog: 12 items.

SO: U-3261, 10 April 53 (Letopis - Zhurnal 'nykh Statey No. 11, 1949)

ALEKSEYEVA, O.I.

Natural conditioned reflexes in Karakul sheep. Izv.AN Uz. SSR no.2:101-110 '56. (MLRA 10:3)

(Karakul sheep) (Lactation) (Conditioned response)

Card 2/2

USSR / Farm Animals. Small Horned Stock. Q-2

Abs Jour: Ref Zhur-Biol., No 23, 1958, 105661.

Author : Alekseyeva, G. I.
Inst : AS USSR.
Title : Some Results of the Ecologico-Physiological Studies of the Karakul Sheep Under Desert Conditions.

Orig Pub: V sb.: Vopr. fiziol. s.-kh. zhivotnykh. M.-L., AN SSSR, 1957, 180-186.

Abstract: The natural conditioned reflexes and peculiarities of digestion in Karakul sheep in primeval and estival seasons were studied. It was established that nursing ewes have a higher metabolism than lactating ones without lambs. The estrangement of lambs from the ewes causes an increase of metabolism. This reaction is more

Card 1/3

ALEKSEYEVA, O.I.; GOTKHEYMER, Ye.R.; MAKSUDOV, I.Kh.

Age and seasonal variations in the skin of Karakul sheep. Uzb. biol.zhur. no.3:79-83 '58. (MIRA 11:12)

1. Institut zoologii i parazitologii AN UzSSR.
(Karakul sheep) (Skin)

ALEKSEYEVA, G.I., kand.sel'skokhoz.nauk

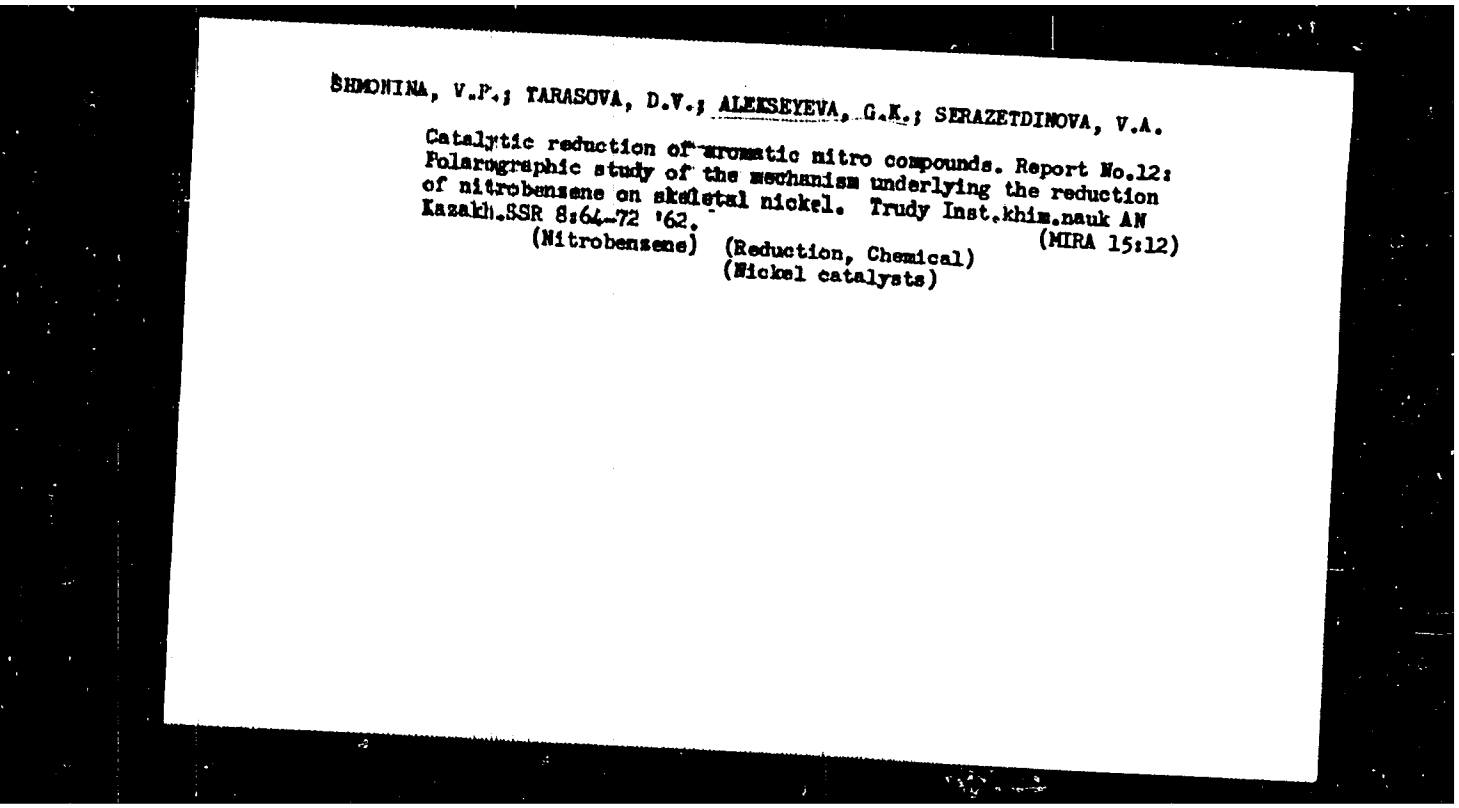
Physiological characteristics of Merino sheep during the process of acclimatization in Uzbekistan. Zhivotnovodstvo 24 no.9:75-78 S '62. (MIRA 15:12)

1. Uzbekskiy nauchno-issledovatel'skiy institut zhivotnovodstva. (Uzbekistan—Merino sheep) (Acclimatization)

ALEKSEYEVA, G.I.

Physiological reaction of merino sheep to the factors of environment in the process of acclimatization. Uzb. biol. zhur. 8 no.2:61-67 '64. (MIRA 17:9)

1. Uzbekskiy nauchno-issledovatel'skiy institut zhivotnovodstva.



SHMONINA, V.P.; TARASOVA, D.V.; ALEKSEYEVA, G.K.; SERAZETDINOVA, V.A.

Catalytic reduction of aromatic nitro compounds. Report No.12: Polarographic study of the mechanism underlying the reduction of nitrobensene on skeletal nickel. Trudy Inst.khim.nauk AN Kazakh.SSR 8:64-72 '62. (MIRA 15:12)

(Nitrobensene) (Reduction, Chemical) (Nickel catalysts)

ALEKSEYEVA, G.K.; YEGOROVA, G.D.; MINAYEVA, Ye.V.; SVIRKINA-DEMINA, G.G.; NOVIK-ZOLOTOVA, L.N.; SPYSHNOV, P.A., titul'nyy red.; NOVITSKIY, L.M., nauchn. red.; VDOVENKO, Z.I., red.; GOL'BERG, T.M., tekhn.red.

[Album of new recommended construction equipment] Al'bom novoi stroitel'noi tekhniki rekomenduemoi k vnedreniiu. Moskva, Gosstroiizdat. No.7. [Sanitary equipment] Sanitarno-tekhnicheskoe stroitel'stvo. 1963. 84 p.
(MIRA 16:11)
(Municipal engineering--Equipment and supplies)
(Sanitary engineering--Equipment and supplies)

SOKOL'SKIY, D.V.; DRUZ', V.A.; ALEKSEYEVA, G.K.; SHUMATEVA, N.F.; MUSINA, S.A.

Use of oxide catalysts on carriers for the purification of exhaust gases by removing carbon monoxide and hydrocarbons. Trudy Inst.khim.nauk AN Kazakh. SSR 13:174-201 '65. (MIRA 18:9)

ACCESSION NR: AP4015148 S/0289/63/000/003/0092/0096

AUTHORS: Shostakovskiy, M.F.; Sokolov, B.A.; Khil'ko, O.N.; Balezina, G.G.; Alekseyeva, G.M.

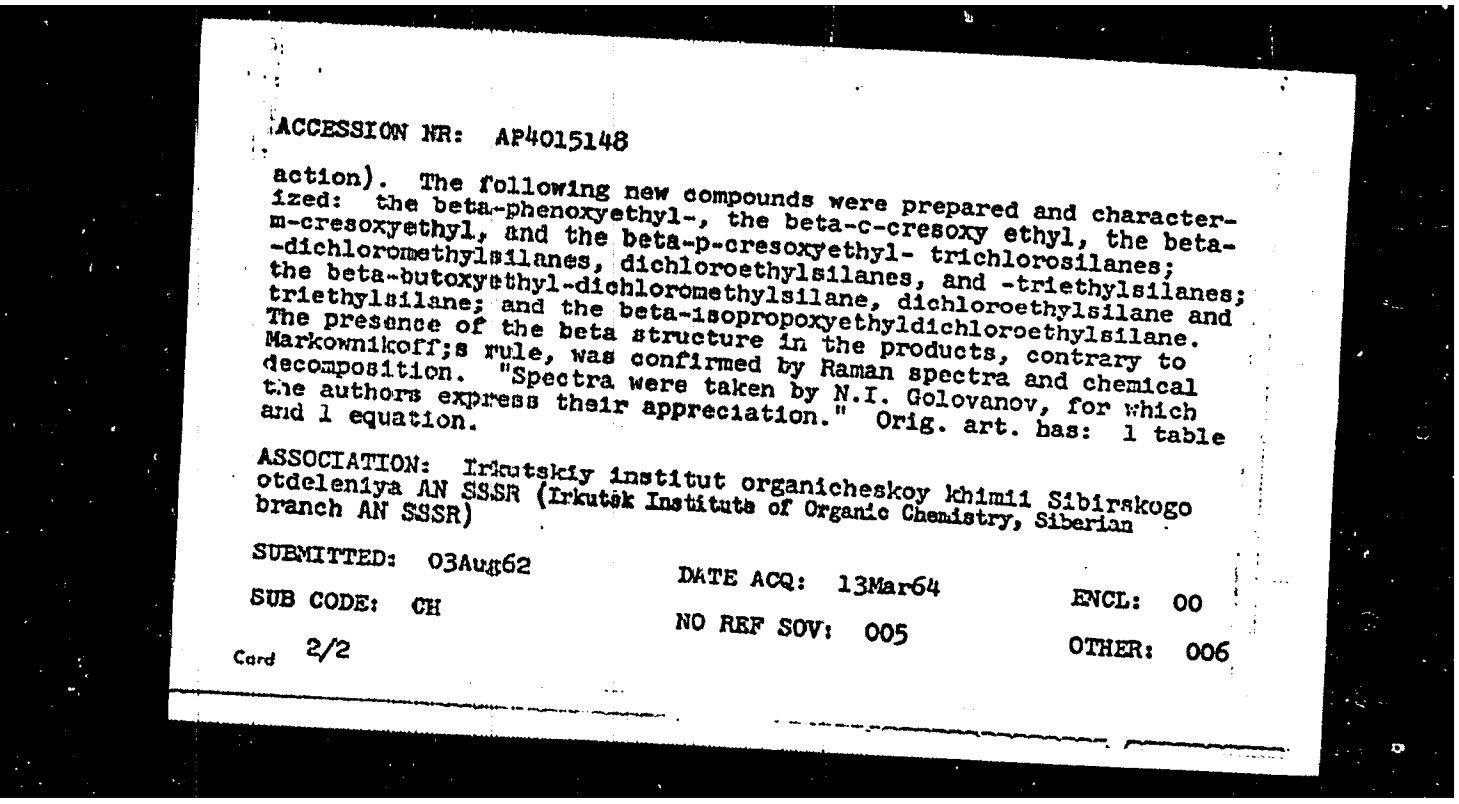
TITLE: Addition of silane hydrides to vinyl ethers

SOURCE: AN SSSR. Sib. otd. Izv., no. 11. Ser. Khim. nauk, no. 3, 1963, 92-96

TOPIC TAGS: silicohydride, silane, silane hydride, addition reaction, vinyl ether addition reaction, trichlorosilane ether, dichloromethylsilane ether, dichloroethylsilane ether, triethylsilane ether, beta ether, Markownikoff rule, Ram - spectrum

ABSTRACT: The addition of trichlorosilane, methyldichlorosilane, ethyldichlorosilane, and triethylsilane to vinylisooprophyl-, vinylbutyl-, vinylphenyl-, vinyl- o-, m- and p-cresyl ethers were studied. The addition of equimolar amounts of silane and vinyl ether was effected by heating and using chloroplatinic acid as the catalyst (beta-phenoxyethyltriethylsilane was prepared by the Grignard re-

Card 1/2



ACCESSION NR: AP4015148

action). The following new compounds were prepared and characterized: the beta-phenoxyethyl-, the beta-c-cresoxy ethyl, the beta-m-cresoxyethyl, and the beta-p-cresoxyethyl- trichlorosilanes; the beta-butoxyethyl-dichloromethylsilanes, dichloroethylsilanes, and -triethylsilanes; -dichloromethylsilanes, dichloroethylsilane and triethylsilane; and the beta-isopropoxyethyldichloroethylsilane. The presence of the beta structure in the products, contrary to Markownikoff;s rule, was confirmed by Raman spectra and chemical decomposition. "Spectra were taken by N.I. Golovanov, for which the authors express their appreciation." Orig. art. bas: 1 table and 1 equation.

ASSOCIATION: Irkutskiy institut organicheskoy khimii Sibirskogo otdeleniya AN SSSR (Irkutsk Institute of Organic Chemistry, Siberian branch AN SSSR)

SUBMITTED: 03Aug62 DATE ACQ: 13Mar64 ENCL: 00

SUB CODE: CH NO REF SOV: 005 OTHER: 006

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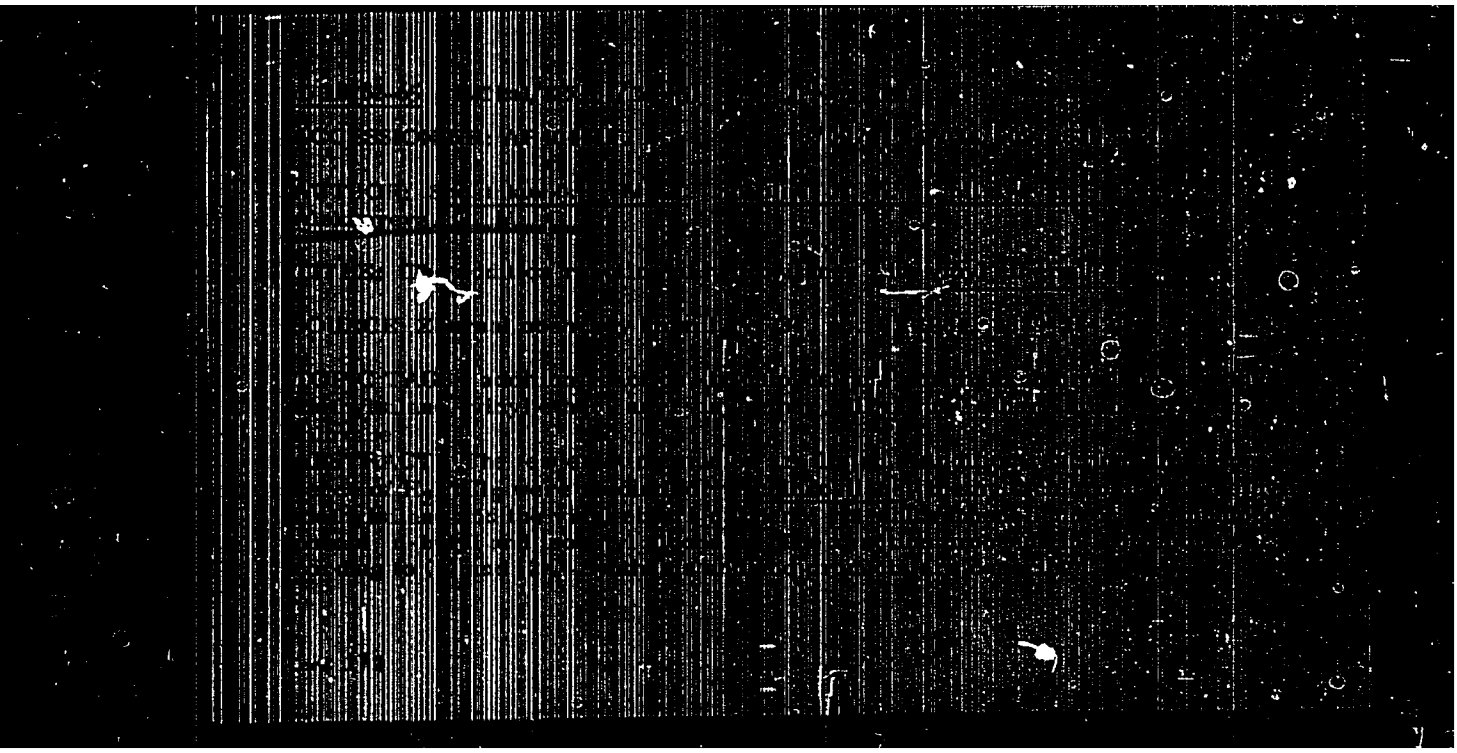

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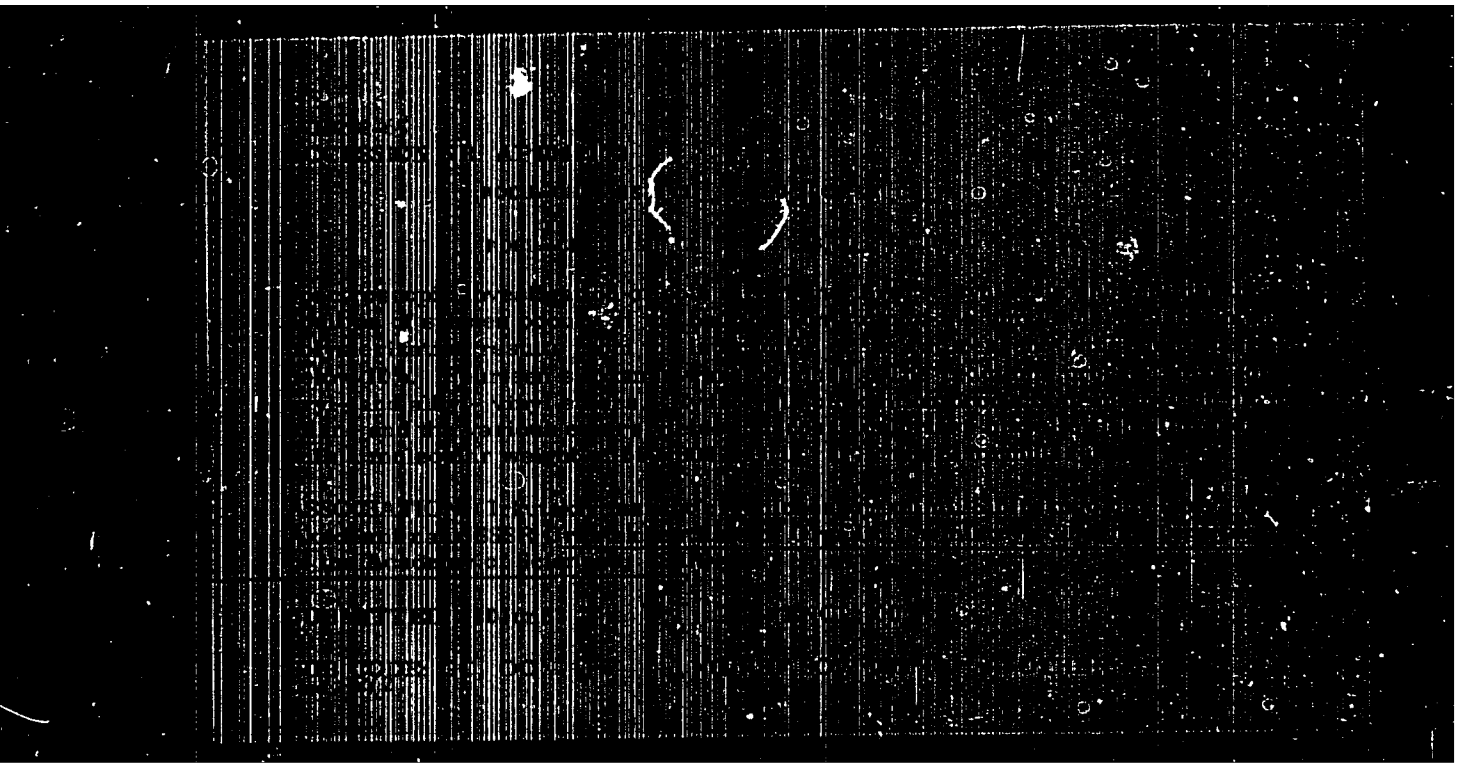

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SHOSTAKOVSKIY, M.F.; SOKOLOV, B.A.; DMITRIYEVA, G.V.; ALEKSEYEVA, G.M.

Addition of silanes to vinyl ethers. Zhur. ob. khim. 34 no.9: 2839-2842 S '64. (MIRA 17:11)

1. Irkutskiy institut organicheskoy khimii Sibirskogo otdeleniya AN SSSR.

SOKOLOV, B.A.; ALEKSEYEVA, G.M.; DMITRIYEVA, G.V.

Organofluorosilicon compounds. Part 2: Reaction of silane hydrides with 1-butoxy-1,3-butadiene. Zhur. ob. khim. 35 no.10:1839-1840 O '65. (MIRA 18:10)

1. Irkutskiy institut organicheskoy khimii Sibirskogo otdeleniya AN SSSR.

SOV/137-58-9-19957

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 269 (USSR)

AUTHORS: Alekseyenko, M.F., Alekseyeva, G.N., Orekhov, G.N., Fedotova, L.S.

TITLE: A Study of the Sensitivity of Structural Steels to Overheating (Izucheniye chuvstvitel'nosti konstruktsionnykh staley k peregrevu)

PERIODICAL: Metallovedeniye i term. obrabotka. Moscow, Metallurgizdat, 1958, pp 21-30

ABSTRACT: An investigation is made of the tendency of 15Kh2GNTA, 25Kh2GNTA, 30Kh2N2VA, and 30Kh3VA steels to overheat in the 900-1300°C temperature interval, and the possibility of correcting this tendency is studied. It is found that overheating may be corrected by normalization at 900-950°. The standard mechanical properties of the overheated and the normally treated metal are identical. The overheating effect is found in impact testing at -70°, in notch tensile testing at 8° notch angle and in fatigue testing; overheating reduces a_k from 9 to 3.4 kgm/cm^2, σ_b from 106 to 68-77 kg/mm^2, and σ_{-1} by 3-6 kg/mm^2. The correction of overheated steel by

Card 1/2

SOV/137-58-9-19967

A Study of the Sensitivity of Structural Steels to Overheating

normalization from a temperature of 150-180° higher than the Ac_3 point confirms the conclusions of a number of investigators to the effect that Chernov's point "B" cannot be identified with the Ac_3 point.

F.U.

1. Steel--Heat treatment 2. Steel--Temperature factors 3. Steel--Test methods

Card 2/2

ALEKSEYEVA, G. N.

49

PHASE I BOOK EXPLOITATION SOV/5435

Kiselev, P. N., Professor, G. A. Gusterin, and A. I. Strashinin, Eds.

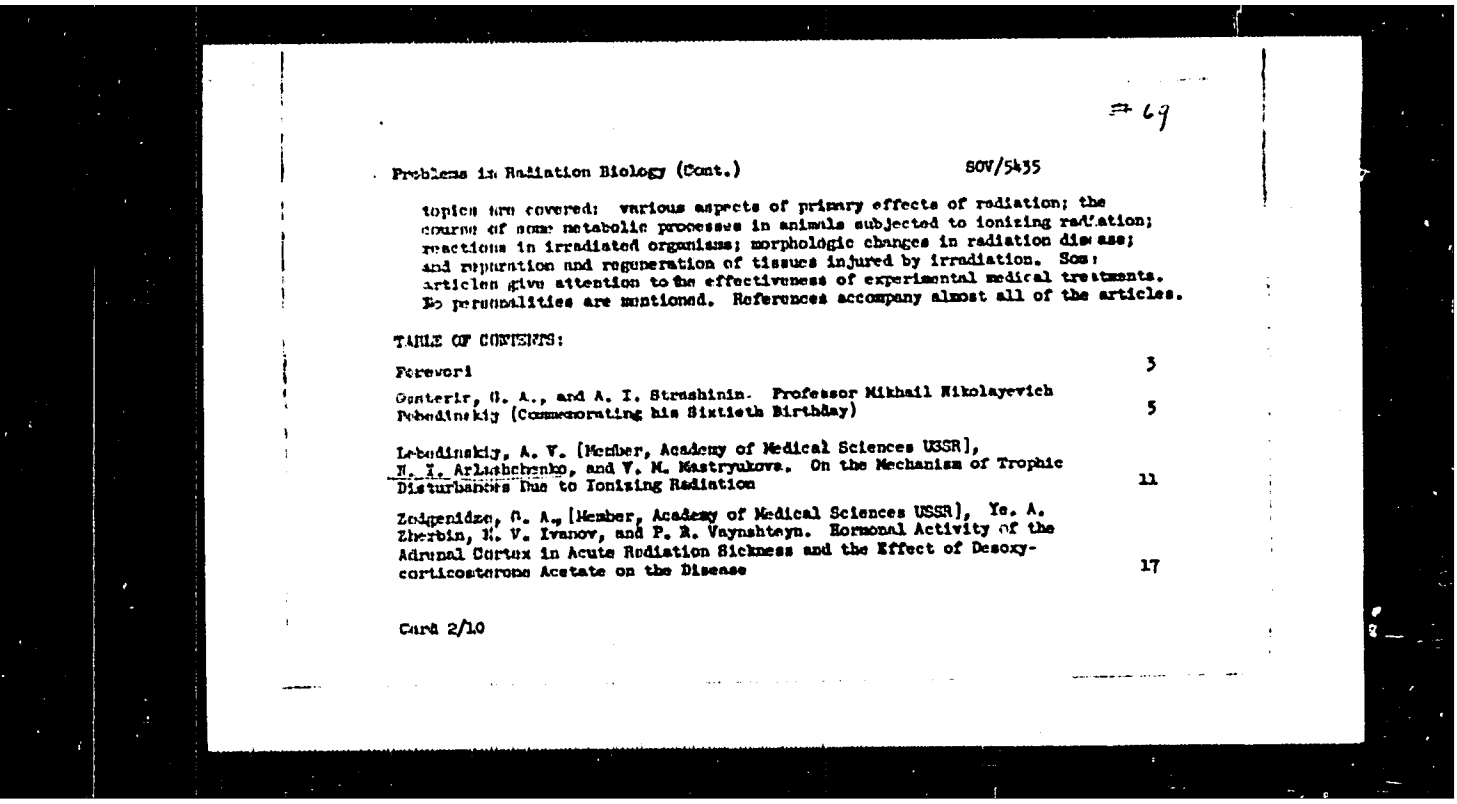
Voprosy radiobiologii. t. III: Sbornik trudov, posvyashchennyy 60-letiyu so dnya rozhdeniya Professora M. N. Pobedinskogo (Problems in Radiation Biology. v. 3: A Collection of Works Dedicated to the Sixtieth Birthday of Professor M[ikhail] N[ikolayevich] Pobedinskiy [Doctor of Medicine]) Leningrad. Tsentr. n-issl. in-t med. radiologii M-va zdravookhraneniya SSSR, 1960. 422 p. 1,500 copies printed.

Tech. Ed.: P. S. Peleshuk.

PURPOSE: This collection of articles is intended for radiobiologists.

COVERAGE: The book contains 49 articles dealing with pathogenesis, prophylaxis, and therapy of radiation diseases. Individual articles describe investigations of the biological effects of radiation carried out by workers of the Central Scientific Research Institute for Medical Radiology of the Ministry of Public Health, USSR. [Tsentral'nyy nauchno-issledovatel'skiy institut meditsinskoy radiologii Ministerstva zdravookhraneniya SSSR] during 1958-59. The following

Card 1/10



#69

Problems in Radiation Biology (Cont.) SOV/5435

topics are covered: various aspects of primary effects of radiation; the course of some metabolic processes in animals subjected to ionizing radiation; reactions in irradiated organisms; morphologic changes in radiation disease; and reparation and regeneration of tissues injured by irradiation. Some articles give attention to the effectiveness of experimental medical treatments. No personalities are mentioned. References accompany almost all of the articles.

TABLE OF CONTENTS:

Card 2/10

Problems in Radiation Biology (Cont.) SOV/5435

Card 4/10

[illegible handwriting], G. A.

(e)

Influence of Ionizing Radiation on Processes of Cholinergic Stimulation

A. M. [illegible], G. A. Rokhinkova, A. V. Lazovskya, ...
G. N. Alexseeva and V. I. Shorohogolov

The influence of ionizing radiation was studied on processes of cholinergic stimulation in various links of the
effect arc (the central nervous system, vegetative ga[illegible] ...ion, neuromuscular synapses) in animals exposed to single
total-body X-ray irradiation (100-5000 r). Experiments were carried out on cats, rabbits, white mice and frogs
with different tests and methods (electro-encephalography, determination of the summation of nervous impulses,
record of contraction in the small intestine and isolated skeletal muscle, determination of cholinesterase activity
and cellular respiration efficiency when using pharmacological agents and enzyme poisons).
The investigations established a decrease in cholinergic structure sensitivity to analgesics, neuroplegics and
ganglyolytics, and an increase in cholinergic structure sensitivity to narcotics, anticholinesterases, cholinomimetics,
curare-like and local anaesthetic substances.
These changes have a phasic character and they depend on the functional ability of the cholinergic structure
and the degree of radiation injury.
The changes in the irradiated animal are apparently due (in addition to other factors) to the breakdown of
oxidative phosphorylation, the consequence of which may be the breakdown of the acetylcholine metabolism and
a change of the cholinergic structure reaction to pharmacological agents.

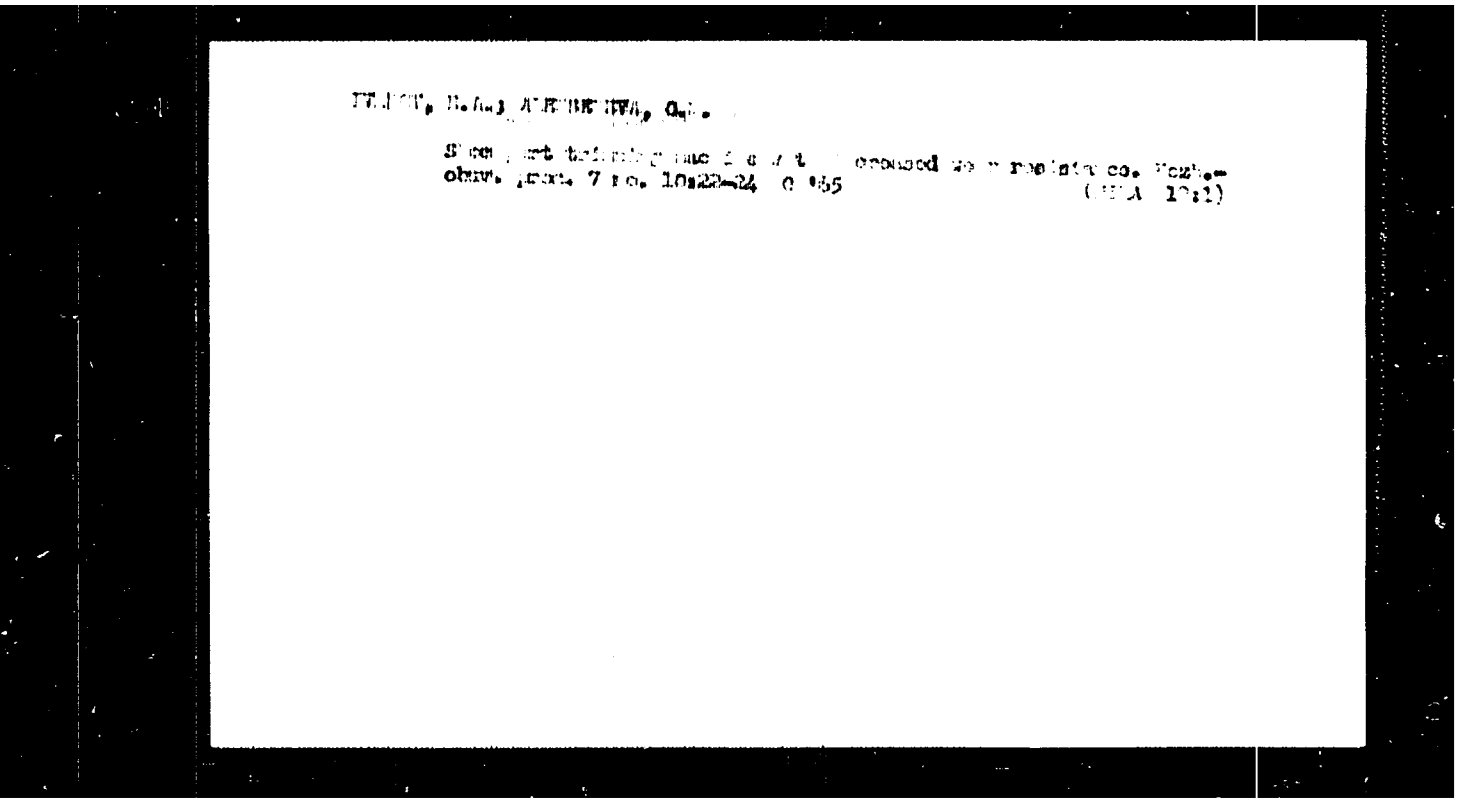
The Central Research Institute of Medical Radiology of the Ministry of Health, Leningrad, USSR

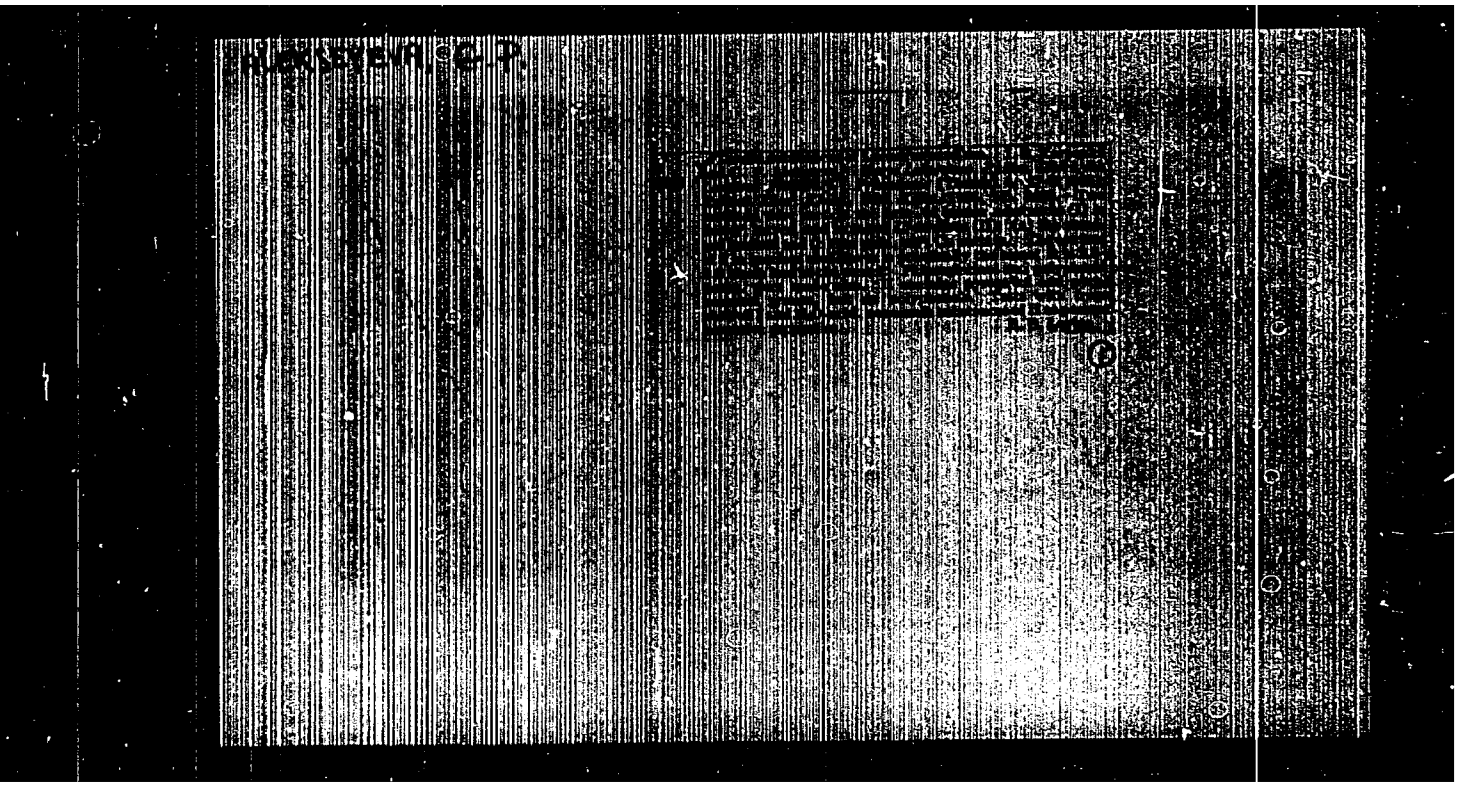
report presented at the 2nd Intl. Congress of Radiation Research,
Harrogate/Yorkshire, Gt. Brit. 5-11 Aug 1962

IVANOV, E.A.; ALEKSEYEVA, G.N., mladshiy nauchnyy sotrudnik

Sliver guides of carding machines made from wood laminate.
Tekst. prom. 24 no.10:74-75 O '64. (MIRA 17:12)

1. Nachal'nik otdela fiziko-khimicheskikh issledovaniy Orlovskogo nauchno-issledovatel'skogo instituta legkogo mashinostroyeniya (for Ivanov). 2. Otdel fiziko-khimicheskikh issledovaniy Orlovskogo nauchno-issledovatel'skogo instituta legkogo mashinostroyeniya (for Alekseyeva).





ALEKSEYEVA, G. I.

Alekseyeva, G. I.

"The topological classification of collineations of a projective plane." Moscow City Pedagogical Inst imeni V. P. Potemkin. Moscow, 1956 (Dissertation for the degree of Candidate in Physicomathematical Science)

Knizhnaya letopis'
No. 35, 1956. Moscow

ACC NR: AP7000595 SOURCE CODE: UR/0129/66/000/011/0045/0049

AUTHOR: Alekseyeva, G. P., Alekseyenko, M. F.

ORG: none

TITLE: Heat treatment and mechanical properties of die steels

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 11, 1966, 45-49

TOPIC TAGS: die steel, metal heat treatment, hardness, tempering, phase composition / / EI955 die steel, 4Kh5V4FSM die steel, 3Kh2V8 die steel

ABSTRACT: On the basis of specially constructed diagrams of isothermal transformation of austenite, techniques of optimal heat treatment were experimentally developed for the new die steels EI955 and 4Kh5V4FSM (EI956). Thus complete transformation of austenite into sorbite-like pearlite is assured by isothermal annealing of both steels at 750-780°C for 1 hr. The optimal quenching temperature for EI955 steel is 1025-1050°C and for 4Kh5V4FSM steel, 1050-1075°C. Compared with the conventional die steel 3Kh2V8 (H_{RC} 46-58, quenching temperature 1125-1150°C) the steels EI955 and 4Kh5V4FSM always display a higher hardness (H_{RC} 58-59) after hardening, owing to their more balanced ratio of W (at.%) to C (at.%), W/C = 1.25 (see

Card 1/3 UDC: 620.17:669.14.254

table).

Mark of steel	Content of elements in %						Temperature of critical points in °C	
	C	Mn	Si	Cr	W	V	Ac_1	Ac_3
3Kh2V8	0.37	0.40	0.17	2,56	8.2	0.43	830	-
4Kh5V4FSM	0.40	0.39	0.75	4.55	3.72	0.47	860	890
EI955	0.47	0.38	0.15	2.89	1.24	0.75	789	810

Similarily, these two steels are less oxidation-prone at 1050°C than 3Kh2V8 steel. The effect of tempering on the mechanical properties of all three steels was investigated as a function of the tempering temperature and it was found that on tempering at 550°C all these steels have high strength properties but low plastic properties. Tempering at 575-625°C, on the other hand, assures satisfactory plastic properties (relative elongation 10%, reduction of area 10-20%) and strength (ultimate strength 150 kg/mm^2). In the event of incomplete cooling

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ACC NR: AP7000595

the amount of residual austenite in 3Kh2V8 steel is smaller than in EI955 and 4Kh5V4FSM steels and hence the new steels must be subjected to a second tempering for the purpose of a more complete transformation of the products of the decomposition of austenite occurring in the course of the first tempering. Orig. art. has: 5 figures, 5 tables.

SUB CODE: 13, 11/ SUBM DATE: none/ ORIG REF: 003/ OTH REF: 001

Card 3/3

*6(*)
AUTHOR: Alekseyeva, G.P. SOV/140-59-2-2/30

TITLE: Topological Classification of the Collineations of the Projective Plane (Topologicheskaya klassifikatsiya kollineatsiy proyektivnoy ploskosti)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Matematika, 1959, Nr 2, pp 12-27 (USSR)

ABSTRACT: The present paper is the candidate-dissertation of the author and was published in 1954 without proofs [Ref 9]. The principal results - projective and topological classification of the collineations - are compressed in two tables. The author treats: § 1 Projective classification of collineations, § 2 topological classifications in dependence of the number of fixed points, § 3 collineations with a fixed line and an isolated fixed point (hyperbolic homology), § 4 collineations with three different fixed points, § 5 collineations with a fixed point not lying on the invariant line, § 6 collineations with two fixed points, § 7 collineations, the fixed points of which form a line or collineations with a fixed point on the invariant line.

Card 1/2

Topological Classification of the Collineations of the Projective Plane SOV/140-59-2-2/30

The author thanks her leader V.A.Yefremovich, P.S.Aleksandrov for giving the theme, And V.G.Boltyanskiy for remarks.
There are 5 figures, 2 tables, and 9 references, 6 of which are Soviet, 1 Hungarian, 1 American, and 1 French.

ASSOCIATION: Shuyskiy pedagogicheskiy institut (Shuya Pedagogical Institute)

SUBMITTED: March 29, 1958

Card 2/2

129-58-7-1/17

AUTHORS: Gulyayev, A. P., Doctor of Technical Sciences, Professor, Rastem, S.I., Candidate of Technical Sciences and Orekhov, G. N. and Alekseyeva, G.P., Engineers

TITLE: Investigation of New Die Making Steels for Hot Stamping of High Temperature Alloys (Issledovaniye novykh shtampovykh staley dlya goryachey shtampovki zharoprochnykh splavov)

PERIODICAL: Metallovedeniye i Obrabotka Metallov, 1958, Nr 7, pp 2-10 + 2 plates (USSR)

ABSTRACT: This study has been awarded a prize at the imeni D.K.Chernov NTO Mashprom competition for the best research work carried out in 1955-1957. For hot stamping the Soviet steels 5KhNM and 5 KhGM were used in the past and were subsequently substituted by various steels not containing molybdenum, which is a scarce material in the Soviet Union. In the introduction the authors summarise the effects of the individual elements thus: tungsten ensures red hardness up to 620°C and improves the wear resistance. A tungsten content exceeding 10% will not bring any further improvement in the properties. On the other hand, it affects adversely the resistance of the materials to temperature

Card 1/5

Investigation of New Die Making Steels for Hot Stamping of High Temperature Alloys

changes, it brings about an increase in the quantity of ferrite at the hardening temperature and a tendency to form grinding cracks. 2. Molybdenum is twice as effective as tungsten. For an equal hardness, molybdenum steel will have better physical properties than tungsten steel. Molybdenum improves the hardenability, increases the resistance to scoring, improves the hardness. However, it reduces the hardening temperature range, it causes surface decarburisation and makes the steel susceptible to grain growth. 3. Chromium reduces the tendency of the steel to oxidise, improves the hardenability and ensures red hardness up to 425°C. However, longer heating is necessary for dissolving the carbides. 4. Vanadium reduces the grain size. 5. Silicon influences the character of the scale forming in air; instead of a dense film an easily removeable powdery oxide is obtained. Furthermore, it increases the wear resistance. Of great importance is carbon which increases the strength, the wear resistance and the hardenability. However, an increased carbon content brings about increased brittleness and scoring

Investigation of New Die Making Steels for Hot Stamping of High Temperature Alloys

cracks. Die-making steel contains 0.25 to 0.60% C Fifteen new grades of die-making steels were develope. and investigated. For comparing the properties of these steels the Soviet steel 3Kh2V8 has also been investigated and the respective values are used as reference values. The chemical compositions of the investigated steels are entered in Table 1, p.3. A technique has been developed for testing die-making steels. The obtained results are described in great detail; they are also entered in tables and plotted in graphs. In Fig.1, p.4 the influence of the hardening temperature on the hardness of some experimental steels is graphed. Figs.2-5 (plate) show the micro-structure of some of the investigated steels after various heat treatment regimes. In Fig.6 the dependence is graphed of the hardness of some of the experimental steels on the tempering temperature. Fig.7 shows the hardenability of the experimental steels. Fig.8 shows the dependence of the strength of the experimental steels on the test temperature. Fig.9 shows the dependence of the yield point of the investigated

Investigation of New Die Making Steels for Hot Stamping of High Temperature Alloys

steels on the temperature. Fig.10 shows the dependence of the relative elongation of the investigated steels on the temperature. Fig.11 shows the dependence of the relative contraction of these steels on the temperature. Fig.12 shows the dependence of the impact strength of the investigated steels on the temperature. Fig.13 shows the hot hardness of the experimental steels. Fig.14 indicates the resistance to temperature changes of the individual experimental steels. Table 2 gives the hardness of the investigated steels after hardening and temparing from various temperatures. Table 3 gives the hardness of the experimental steels after heating to the hardening temperature and cooling under various conditions. The main data on the mechanical properties and chemical compositions of the experimental steels are summarised in Table 5. The most important properties of these steels from the point of view of manufacturing dies were determined. Furthermore, four steels for manufacturing dies to be used for stamping high temperature steels are proposed, the chemical analyses of whic

Card 4/5

Investigation of New Die Making Steels for Hot Stamping of High Temperature Alloys

are entered in Table 6, p.10. The authors advocate testing these steels under shop conditions. There are 14 figures, 6 tables and 7 references, 1 of which is Soviet, 1 German and 5 English.

ASSOCIATION: Moskovskiy vecherniy mashinostroitel'nyy institut (Moscow Evening Mechanical Engineering Institute)

S/123/61/000/012/002/042
A004/A101

AUTHORS: Gulyayev, A. P.; Rustem, S. L.; Orekhov, G. N.; Alekseyeva, G. P.

TITLE: New steels for the drop forging of heat-resisting alloys

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 12, 1961, 12, abstract 12A91 (V sb. "Metallovedeniye i term. obrabotka metallov". [Tr. Sektsii metalloved. i term. obrabotki metallov. Tsentr. pravl. Nauchno-tekhn. o-va mashinostroit. prom-sti, no.2], Moscow, 1960, 179-196)

TEXT: The authors investigated the physical-mechanical properties (hardenability, optimum heat-treatment conditions, heat-resistance, tempering ability, hardness, scale resistance, resistance to adhesion, conglomeration ability, etc.) of 16 steel compositions used for the drop forging of heat-resisting alloys. Based on the tests carried out, the steel grades 4Х3В8М (4Kh3V8M) and 4Х3В2М2Ф (4Kh3V2M2F) are recommended for forging dies.

[Abstracter's note: Complete translation]

Card 1/1

ALEKSEYEVA, G. S.

ALEKSEYEVA, G.S.: "The effect of various pharmacological substances on the regeneration of the epithelium of the rabbit cornea." First Leningrad medical inst imeni Academician I. P. Pavlov. Chair of Pharmacology. Leningrad, 1956. (Dissertation for the Degree of Candidate in medical Sciences).

SO: Letopis' [illegible], No 23, 1956

USSR / General Biology. Cytology. B-2

Abs Jour : Ref Zhur - Biol., No 11, 1958, No 47496

Author : Aloksoyova, G. S.
Inst : ~~Not given~~
Title : The Effect of Aminosine on Cell Division

Orig Pub : Farmakol i Toksikologiya, 1956 (1957), Supplement to List of Abstracts 30-31

Abstract : The effect of aminosine (I) on the mitotic process has been studied in the corneal epitholium of mature rats injected subcutaneously with doses of 0.002 gms/kg; the rats were examined after $\frac{1}{2}$, 1, $1\frac{1}{2}$, 2 and 7 hours. The effect of I on corneal cultures was also studied. It was found that I not only inhibits mitosis of the cells but also increases the duration of the anaphase and of the telophase. Normal mitotic activity is observed 7 hrs after innoculation. The

Card 1/2

3

ALEKSEYEVA, O.S.

Effect of substances acting chiefly in the region of efferent nerve endings on the regeneration of the corneal epithelium in rabbits [with summary in English]. Farm. i toks. 21 no.4:75-77 Jl-Ag '58 (MIRA 11:11)

1. Kafedra farmakologii (zav. deystvitel'nyy chlen AMN SSSR prof. V.V. Zakusov) 1-go Leningradskogo meditsinskogo instituta imeni akad. I.P. Pavlova.

(AUTONOMIC DRUGS, effects
drugs activating efferent nerve endings, on regen. of corneal epithelium (Rus))
(CORNEA, physiology
regen. of epithelium, eff. of drugs activating efferent nerve endings (Rus))
(REGENERATIONS,
eff. of drugs activating efferent nerve endings on epithelial keratic regen (Rus))

ALEKSEYEVA, G.T. [deceased]; MESHMAN, V., student; RADIOSTINA, A., studentka

Study of the functional rebuilding of the synaptic formations in heterogenous anastomosis of motor secretory nerves. Trudy 1-go MMI 11:25-36 '61. (MIRA 15:5)

1. Laboratoriya obshchey fiziologii tsentral'noy nervnoy sistemy (zav. - prof. P.K. Anokhin) Instituta normal'noy i patologicheskoy fiziologii AMN SSSR, Moskva.
(SALIVARY GLANDS—INNERVATION)
(PHRENIC NERVE—SURGERY) (NERVES, FACIAL—SURGERY)

ALEKSEYEVA, G.V.

Acid mucopolysaccharides of embryonic connective tissue under conditions of the deficiency and excess of thyroid hormones in the organism of a chicken embryo. Izv.SO AN SSSR no. 8. Ser. biol.-med. nauk no.2:108-112 '63. (MIRA 16:11)

1. Institut eksperimental'noy biologii i meditsiny Sibirskogo otdeleniya AN SSSR, Novosibirsk.

ALEKSEYEVA, G.V.

Acid mucopolysaccharides of the basic substance of connective tissue main vessels during the embryonic development of a chick. Izv. SO AN SSSR no.12. Ser. biol.-med. nauk no.3:140-143 '63. (MIRA 17:4)

1. Otdel eksperimental'noy biologii Instituta tsitologii i genetiki Sibirskogo otdeleniya AN SSSR, Novosibirsk.

SOV/120-58-2-25/37

AUTHORS: Alekseyeva, G. Ye. and Maleshkina, L. P.

TITLE: ~~Application of the~~ Hall Effect to the Conversion of a Direct Current into Alternating. (Primeneniye effekta Kholla dlya preobrazovaniya postoyannogo toka v peremennyy)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1958, Nr 2, pp 100-101 (USSR)

ABSTRACT: In order to convert a direct current into alternating one by an application of the Hall effect a plate prepared from a semiconductor and through which a constant current is flowing is placed in a variable magnetic field. The coefficient of conversion K is determined by the ratio of the magnitude of the a-c voltage which appears in consequence of the Hall effect to the d-c voltage applied to the specimen. The aim of the present work was to use this idea for small d-c voltages applied to the specimen and to develop a transistorised amplifier which can be used to amplify the alternating voltage. The specimen

Card 1/3

Application of the Hall Effect to the Conversion of Direct Current into Alternating

was in the form of a plate made from indium antimonide. The latter has a mobility of 20 000 cm^2/voltsec and a specific resistance of 0.01 ohm cm. Its dimensions were 1 x 0.5 x 0.05 cm^2. The leads were attached by means of indium. The surface of the specimen was treated with the SR-4 solvent. The specimen carrying the constant current was placed inside a choke carrying a 50 c/s current. The alternating voltage due to the Hall effect was applied to the amplifier shown in Fig.1 which uses six P6-A semiconductor triodes. The amplifier was tuned to 50 c/s. The ratio of the alternating voltage to the d-c voltage was found to be constant and equal to 17%. 6 - 7 volt signals can in this way be converted into sinusoidal signals. There are 3 figures, no tables and 3 references, 2 of which are English and 1 Soviet.

Card 2/3

SOV/120-58-2-25/37

Application of the Hall Effect to the Conversion of Direct Current into Alternating.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Power Institute)

SUBMITTED June 21, 1957.

Card 3/3 1. Direct current--Magnetic factors 2. Inverted rectifiers--Performance

9(9) SOV/162-58-3-23/26

AUTHORS: Alekseyeva, G.Ye., and Meleshkina, L.P.

TITLE: The Temperature Dependence of Semiconductors Converters (Temperaturnaya zavisimost' poluprovodnikovykh preobrazovateley)

PERIODICAL: Nauchnyye doklady vysshey shkoly, Radiotekhnika i elektronika, 1958, Nr 3, pp 171-175 (USSR)

ABSTRACT: The authors investigated the temperature dependence of a semiconductor converter which converts direct current into alternating current using the Hall effect, /Ref 1/. A plate of antimonous indium InSb is used as a transducer. This device found application in the automatic potentiometer circuit EPD-12 together with a transistorized power amplifier. The output of ac voltage of the InSb transducer decreases by 50% when working at temperatures around 50°. Therefore, the authors investigated three methods of temperature compensation. Figure 3, shows the compensation circuit suggested by Sun Su-Fo/Ref 2/ who included a shunting resistance parallel to the transducer. However, this

Card 1/3

The Temperature Dependance of Semiconductors Converters

leads to a considerable reduction of the converting factor of the InSb transducer. The second method, shown by Figure 4, consists in connecting a thermistor T8M parallel to the transducer, thus the voltage remains constant at the transducer outlet. Although the compensation is adequate, the sensitivity of the device is reduced by 2-3 times. Figure 5, shows another version of temperature compensation using a TOS thermistor, In this case the temperature factor was selected in such a manner that the dc current passing thru the transducer would increase with rising temperature, while the voltage at the dc outlet remained unchanged. The authors also investigated germanium transducers GLS with compensating germanium resistors GM, which showed a somewhat higher temperature stability and which are less sensitive to dc voltage changes than indium transducers. The results of these investigations show that such semiconductor converters

The Temperature Dependence of Semiconductors Converters

and amplifiers may be used in control and measuring circuits. There are 3 circuit diagrams, 5 graphs and 2 Soviet references.

ASSOCIATION: Kafedra promyshlennoy elektroniki Moskovskogo energeticheskogo instituta (Chair of Industrial Electronics of the Moscow Institute of Power Engineering)

SUBMITTED: July 7, 1958

ALEKSEYEVA, G.Ya.; MELESHKINA, L.P.; SOKOLOV, L.S.

Direct current amplifier using a Hall transducer. Nauch. dokl. vys. shkoly; radiotekh. i elektron. no.2:298-302 '59.
(MIRA 14:5)

1. Kafedra promyshlennoy elektroniki Moskovskogo energeticheskogo instituta.

(Amplifiers (Electronics))

ALEKSEYEVA, G.Ye., kand. tekhn. nauk, dots.; BELESHKINA, L.F., dots.; kand. tekhn. nauk; BALUYEV, V.K., inzh.; BAMDAS, A.M., prof., doktor tekhn. nauk; VENIKOV, V.A., prof., doktor tekhn. nauk; YEZHKOV, V.V., kand. tekhn. nauk; ANISIMOVA, N.D., dots., kand. tekhn. nauk; GANTMAN, S.A., kand. khim. nauk; GLAZUNOV, A.A., dots., kand. tekhn. nauk; GOGUA, L.K., inzh.; GREBENNICHENKO, V.T., inzh.; GRUDINSKIY, P.G., prof.; GOHFINKEL', Ya.M., inzh.; ZVEZDIN, A.L., inzh.; KAZANOVICH, G.Ya., inzh.; KNYAZEVSKIY, B.A., dots., kand. tekhn. nauk; KOSAREV, G.V., dots., kand. tekhn. nauk; MESSERMAN, S.M., kand. tekhn. nauk, dots.; KOKHAN, N.D., inzh.; KUVAYEVA, A.F., dots., kand. tekhn.nauk; SOKOLOV, M.M., dots., kand. tekhn. nauk; LASHKOV, F.P., dots., kand. tekhn. nauk; LAZIN, A.I., inzh.; YUDIN, F.I., inzh.; LIVSHITS, A.L., kand. tekhn. nauk; METEL'TSIN, P.G., inzh.; NEKRASOVA, N.M., dots., kand. tekhn. nauk; OL'SHANSKIY, N.A., dots., kand. tekhn. nauk; POLEVAYA, I.V., dots., kand. tekhn. nauk; POLEVOY, V.A., dots., kand. tekhn. nauk [deceased]; RAZEVIG, D.V., prof., doktor tekhn. nauk; RAKOVICH, I.I., inzh.; SOLDATKINA, L.A., dots., kand. tekhn. nauk; TREMBACH, V.V., dots., kand. tekhn. nauk; FEDOROV, A.A., prof., kand. tekhn. nauk; FINGER, L.M., inzh.; CHILIKIN, M.G., prof., doktor tekhn. nauk, glav. red.; ANTIK, I.V., inzh., red. GOLOVAN,A.T., prof.,red.; PETROV, G.N., prof., red.; FEDOSEYEV, A.M., prof., red.

(Continued on next card)

ALEKSEYEVA, G.Ye.—— (continued). Card 2.

[Electrical engineering manual] Elektrotekhnicheskii spravochnik. Pod obshchei red. A.T. Golovana i dr. Moskva, Energiia. Vol.2. 1964. 758 p. (MIRA 17:12)

1. Moscow. Energeticheskiy institut. 2. Moskovskiy energeticheskiy institut (for Golovan, Grudinskiy, Petrov, Fedoseyev, Chilikin, Venikov). 3. Chlen-korrespondent AN SSSR (for Petrov).

ALEKSEYEVA, I. A.

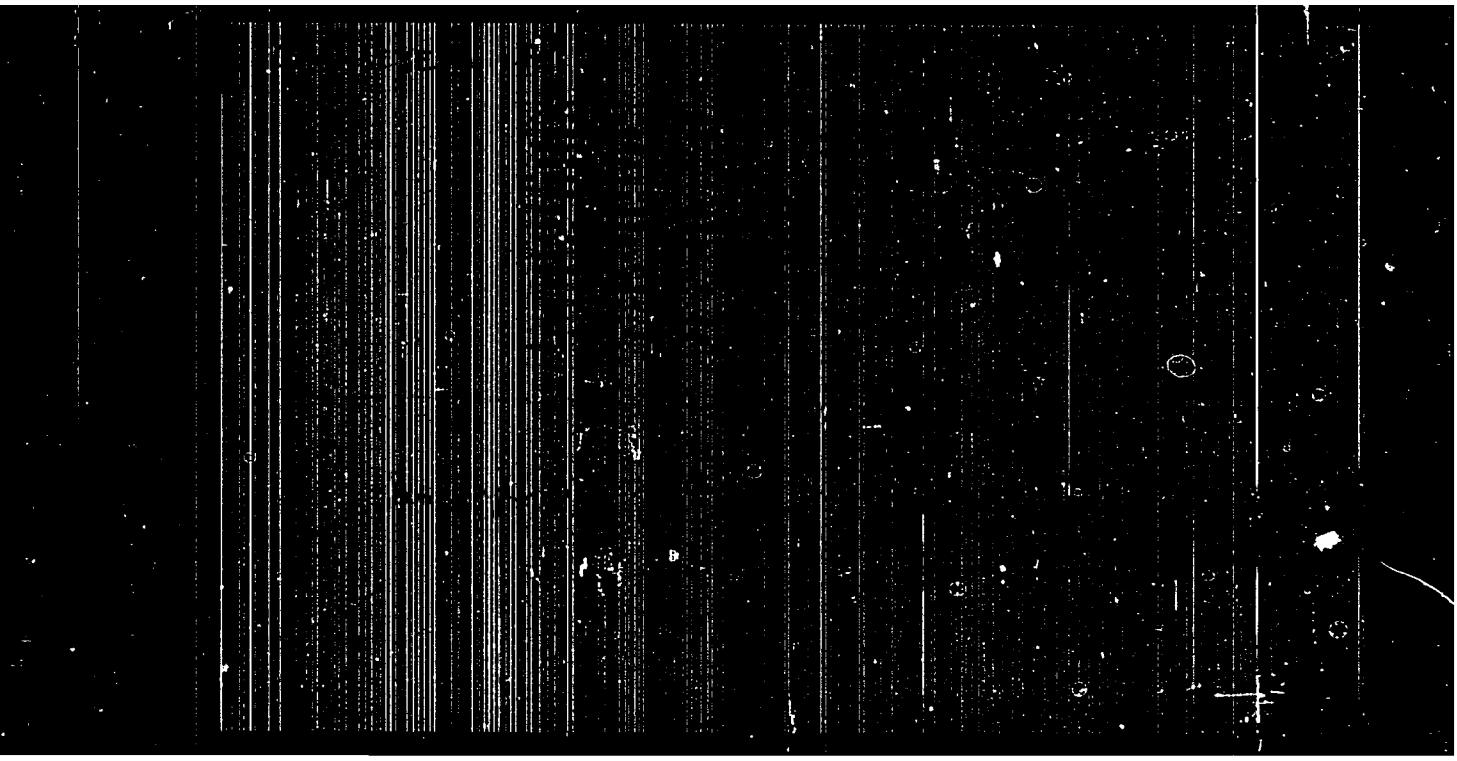
Alekseyeva, I. A. - "Conditioned-reflexes of normal dogs," Report 7, "Comparative characteristics of tactile, auditory and visual conditioned-reflexes," Trudy fiziol. laboratoriy im. Pavlova, vol. XV, 1949, p. 165-70

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 19, 1949)

ALEKSEYEVA, I. A.

"On Certain Physiological Mechanisms of the Conditioned Reflex in Three-Stage Chain Irritation." Cand Biol Sci, Department of Medical and Biological Sciences, Acad Med Sci USSR, Moscow, 1953. (RZH Biol, No 1, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55



APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000101010002-6"

2992. ALEKSEYEVA I. A. Pavlov Div. of Physiol., Inst. of Exp. Med., Leningrad *Conditioned reflexes to a complicated chain of impulses in the dog under conditions of free motion (Russian text)* Z. vyssh. nerv. dejatel. 1956, 6/4 (569—578) Tables 4

A complicated system of conditioned food reflexes in dogs has been worked out. New conditioned reflexes were based on older ones, the old conditioning being the cause for the new one. Finally a very complicated stereotype of successive movements — the whole experiment was carried out with freely moving dogs — was established. The mechanism of this system of conditioned reflexes is discussed. Rasková — Prague

Fiziologicheskiy otdel im. I.P. Pavlova
Institut eksperimental'noy
meditsiny AMN SSSR.)

ALEKSEYEVA, I.A.

Some peculiarities of synthetic function of the cerebral cortex in dogs during the action of a complex chain stimulus [with English summary in insert]. Zhur.vys.nerv.deiat. 6 no.5:742-750 S-O '56. (MLRA 10:2)

1. Fiziologicheskiy otdel im. I.P.Pavlova Instituta eksperimental'noy meditsiny.

(CEREBRAL CORTEX, physiol.
synthetic funct. during action of complex chain stimulus)

USSR/Human and Animal Physiology (Normal and Pathological) T
Nervous System. Higher Nervous Activity. Behavior.

Abs Jour : Ref Zhur Biol., No 6, 1959, 27065

Author : Alekseyeva, I.A.
Inst :
Title : The Action of Components of a Complex Chain Stimulus in Prolonged Exclusion.

Orig Pub : Zh. vyssh. nervn. deyat-sti, 1957, 7, No 2, 241-247

Abstract : In 2 dogs, there were worked out lagging alimentary conditioned reflexes (CR) to a consecutive complex of 3 components, with a duration of 20 sec each, with a duration of the complex of 60 sec. Then, in 15-30 experiments in a row, in place of the complex, one of the components with duration of 60 sec was applied. With this, strong and medium stimuli (buzzer, light) induced CR, but without lagging, independently of the place they had in the complex. Thus, light, which stood in first

Card 1/2

Abs Jour : Ref Zhur Biol., No 6, 1959, 27065

place in the complex and had an inhibitory significance, after two reinforcements, began to induce CR already in the first 20 sec of its action. But a weak stimulus (rod) which stood in third place in the complex and had the greatest positive significance, in isolated application in the course of 60 sec soon stopped inducing CR. CR to another tactile stimulus under 30 second exclusion worked out, but with increase of exclusion to 60 secondes extinguished. -- M.I. Lisina

ALEKSEYEVA, I.A.; KAPLANSKAYA-RAYSKAYA, S.I.

Influence of methionine on the higher nervous activity of rats in protein deficiency. Vop.pit. 19 no.1:45-48 Ja-F '60. (MIRA 13:5)

1. Iz laboratorii vysshey nervnoy deyatel'nosti (zav. - doktor biologicheskikh nauk Ye.A. Yakovleva) Instituta fiziologii AMN SSSR i laboratorii fiziologicheskoy khimii (zav. - S.Ya. Kaplanskiy) Instituta biologicheskoy i meditsinskoy khimii AMN SSSR, Moskva.

(METHIONINE pharmacol.)
(CENTRAL NERVOUS SYSTEM pharmacol.)
(PROTEIN deficiency)

USSR/Human and Animal Physiology (Normal and Pathological) T
Nervous System. Higher Nervous Activity. Behavior.

Abs Jour : Ref Zhur Biol., No 6, 1959, 27073

Author : Alekseyeva, I.A.
Inst :
Title : Production of a Lagging Reflex to a Two-Part Chain Stimulus under Conditions of Free-Movement Activity in Dog.

Orig Pub : Zh. vyssh. nervn. deyat-sti, 1957, 7, No 5, 689-698

Abstract : Under conditions of free movement (method of Kupalov) in a dog a lagging conditioned reflex to a two-part chain stimulus was produced. The time of action of the first component (bell) increased at first from 10 sec to 30, and than to 60 sec. The time of action of the second component (metronome) remined unchanged all the time (10 sec). In lengthening of the time of action of the bell to 60 sec, a disturbance of balance between the

Card 1/2

USSR/Human and Animal Physiology (Normal and Pathological) T
Nervous System. Higher Nervous Activity. Behavior.

Abs Jour : Ref Zhur Biol., No 6, 1959, 27073

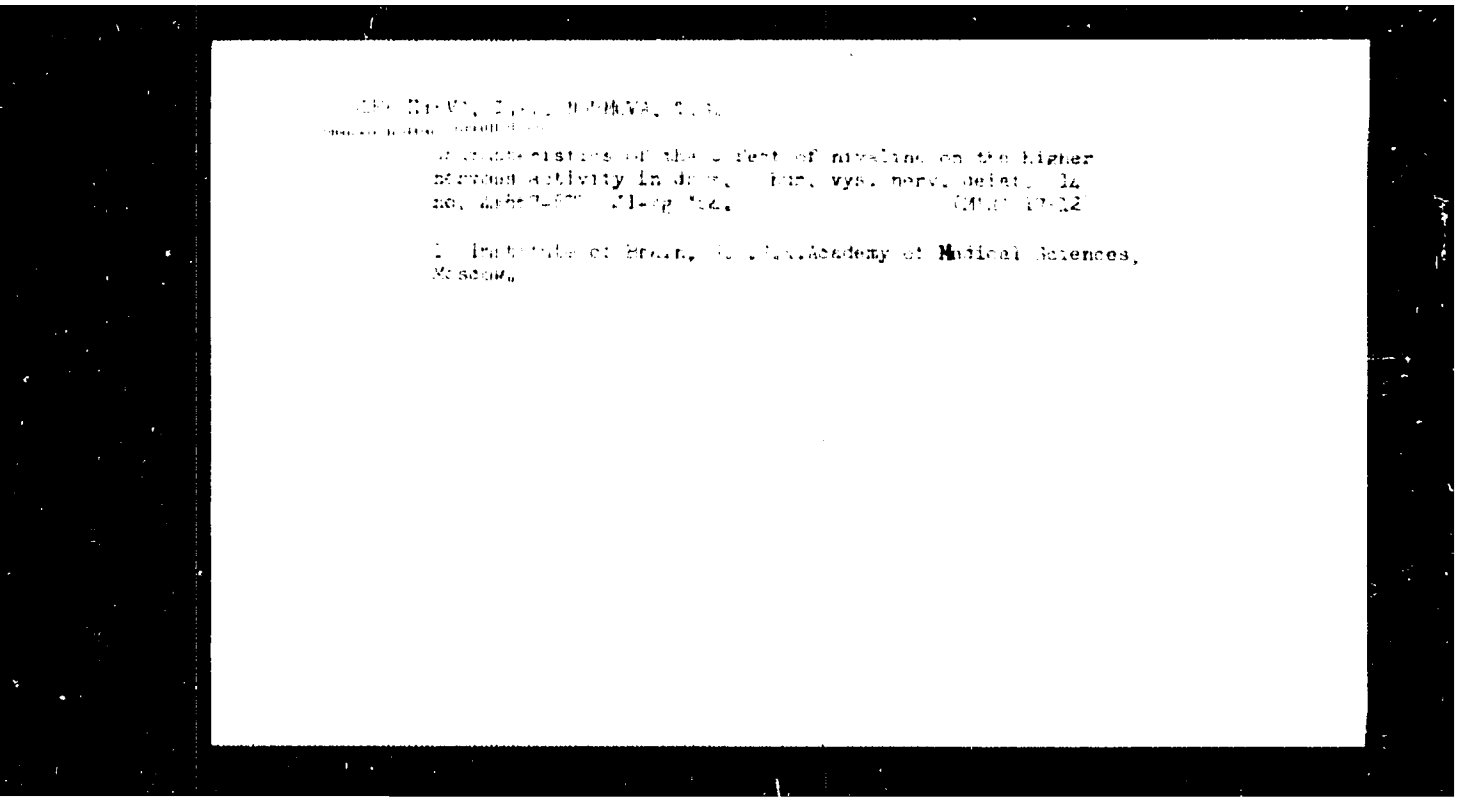
processes of stimulation and inhibition was noted, which points to the difficulty of production of lagging reflex from the motor analyser. In further work in the intervals between stimulations, a sleepy state was noted in dog, which is related with wide irradiation of inhibition in this form of experiment. -- L.A. Proninn

Card 2/2

ALEKSEYEVA, I.A.

Immediate and conditioned reflex effect of inhibitory substances on the higher nervous activity of dogs with organic lesions of various parts of the cerebral cortex. Zhur. vys. nerv. deiat. 10 no. 5:692-698 S-O '60. (MIRA 13:12)

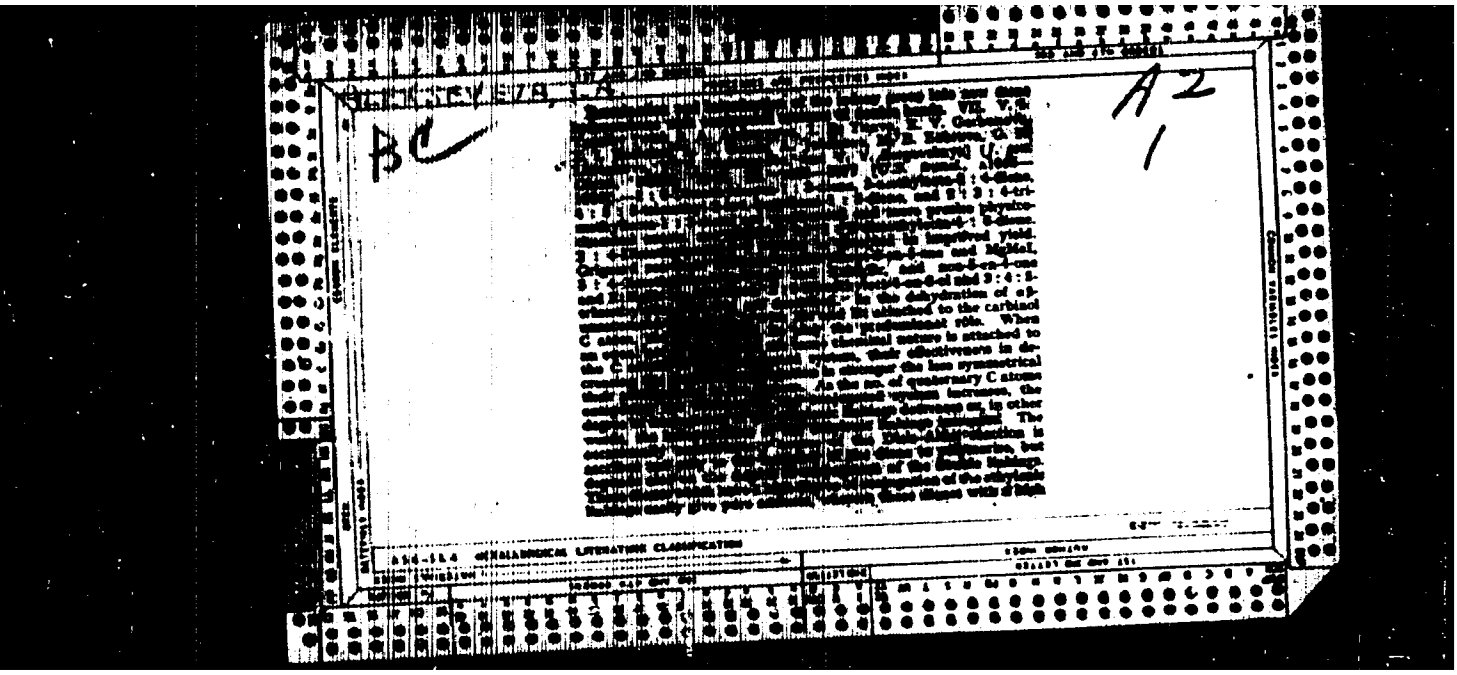
1. Laboratoriya fiziologii i patologii vysshey nervnoy deyatel'nosti Instituta normal'noy i patologicheskoy fiziologii AMN SSSR.
(CEREBRAL CORTEX) (CONDITIONED RESPONSE)

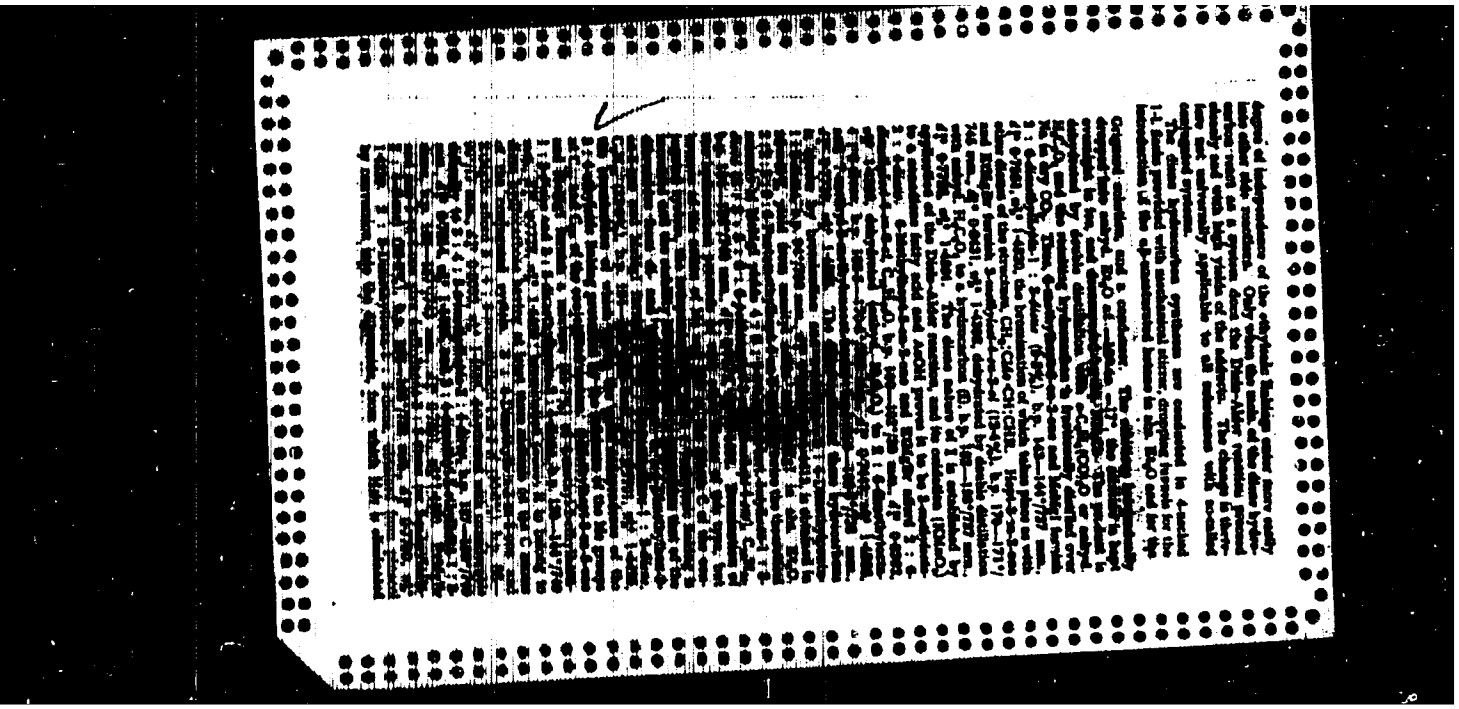


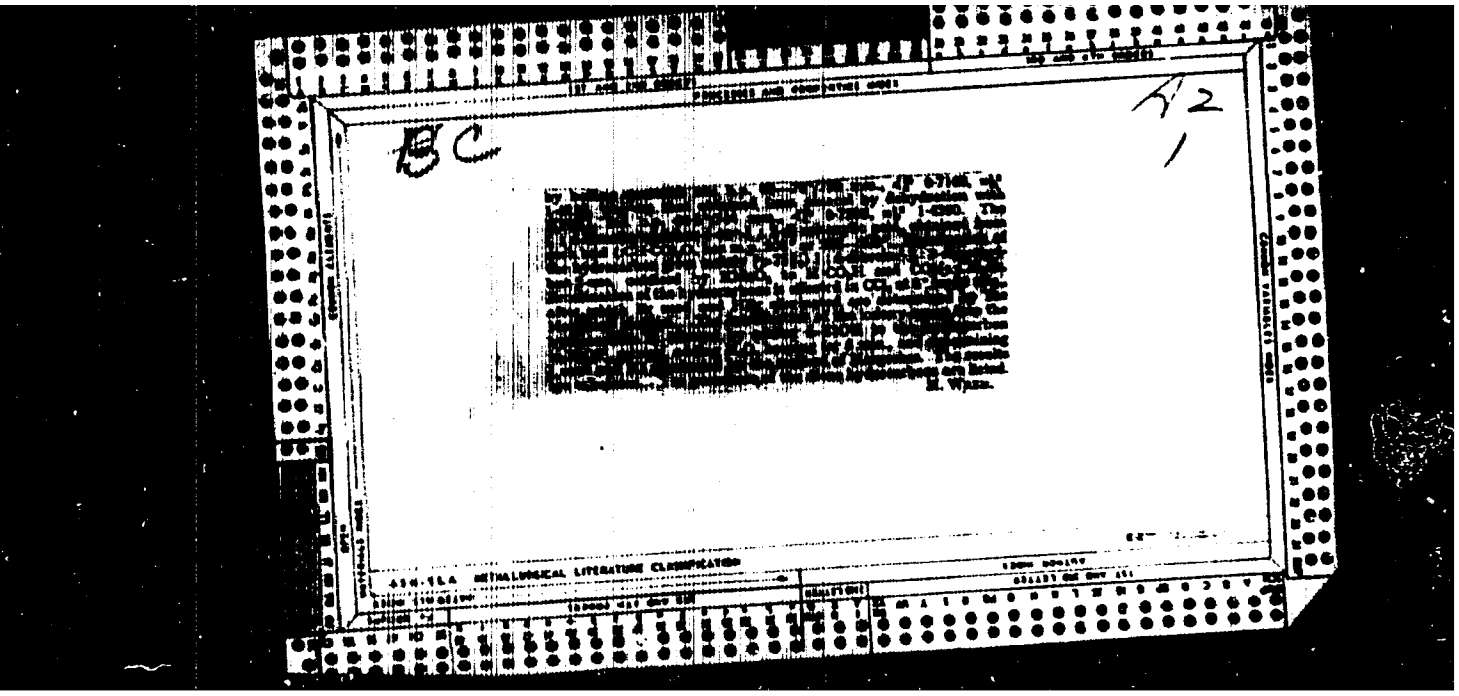
ALEKSEYEVA, I.A.

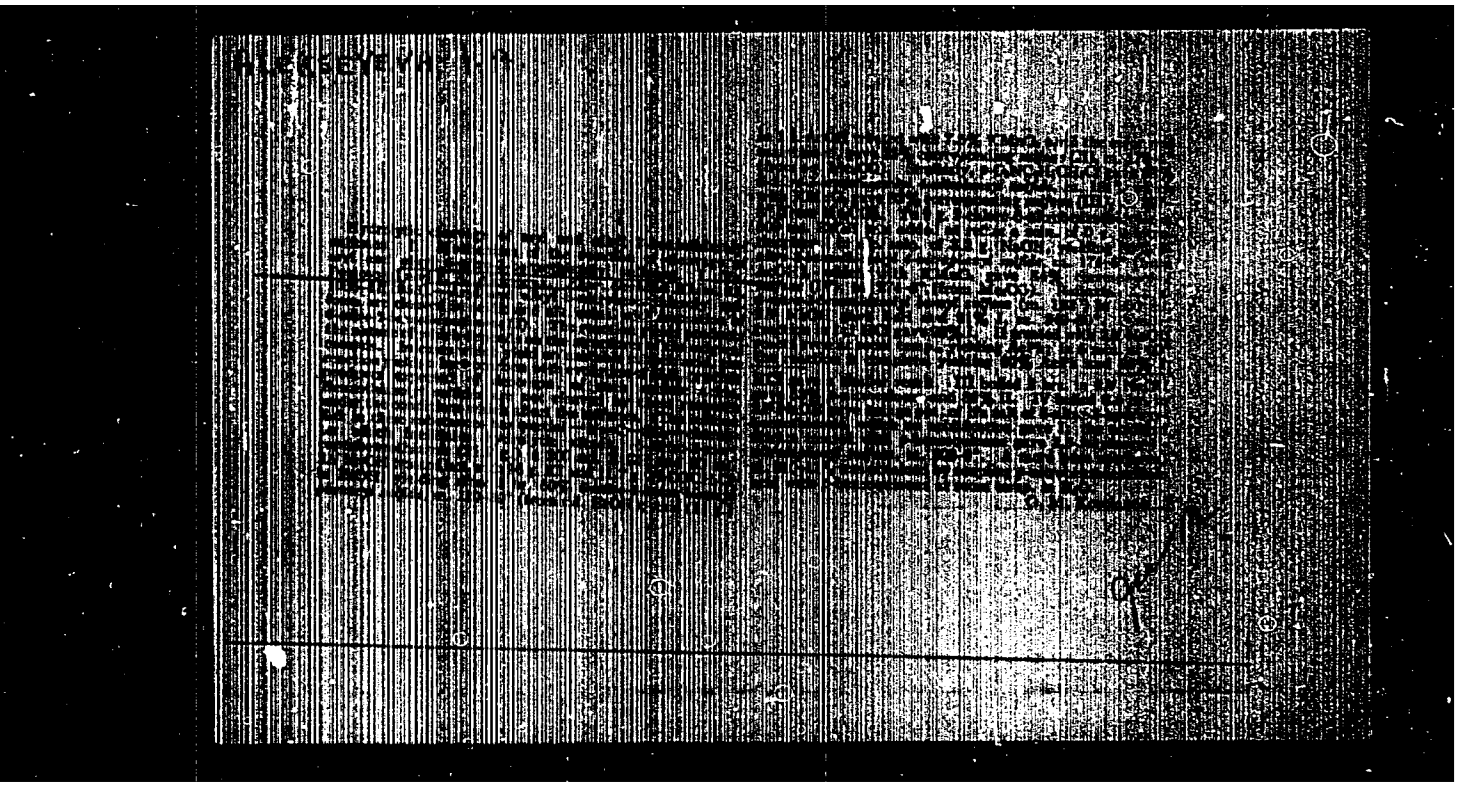
Complex motor reactions to a delayed stimulus under conditions of "voluntary" activity. Zhur. vys. nerv. deiat. 15 no.2:345-350 Mr-Ap '65. (MIRA 18:5)

1. Institut mozga AMN SSSR, Moskva.









ALEKSEYEVA, I. A.

USSR/Chemistry - Hydrolytic splitting

Card 1/1 Pub. 151 - 20/37

Authors : Alekseyeva, I. A., and Postovskiy, I. Ya.

Title : Hydrolytic splitting of benzothiazolyl-2-aryl- and alkylsulfones. Part 2.- Effect of certain substituents on the relative rate of cleavage.

Periodical : Zhur. ob. khim. 24/10, 1811-1819, Oct 1954

Abstract : The relative stability of [illegible] compounds, with respect to hydrolysis, was [illegible] electron-acceptor nitro-group in 6-nitro- [illegible] hydrolysis [illegible] of the [illegible] group increases the hydrolysis [illegible] of hydrolytic cleavage of sulfones with an aliphatic radical was established. Several new benzothiazolyl-2-aryl- and alkylsulfones are described. Five references: 3-USA and 2-USSR (1936-1953). Table.

Institution : The S. M. Kirov Ural Polytechnical

Submitted : May 14, 1954

S/768/60/000/004/002/004
I060/I242

AUTHORS: Plyusnin, V.G., Alekseyeva, I.A., and Babin, Ye. P.

TITLE: Orientation of isopropyl groups in the benzene cycle during catalytic alkylation by propylene over $AlCl_3$, HF, H_2SO_4

SOURCE: Akademiya nauk SSSR. Ural'skiy filial. Institut khimii. Trudy. no. 4. 1960. Sbornik rabot Laboratorii neftesinteza, 49-58

TEXT: Various authors have published conflicting data on this subject. The spectra of combined dispersion of triisopropylbenzene are not described in literature. 1,2,4 and 1,3,5 - triisopropylbenzenes were separated from alkylates and their

Card 1/3

S/768/60/000/004/002/004
IC60, I242

Orientation of isopropyl...

spectra of combined light dispersion were studied. The spectra were photographed on a glass triprismal spectrograph ИСП -51 (ISP-51) on plates with a sensitivity of 45 units GOST. It is possible to determine by this method the composition of alkylates obtained by alkylation of benzene by propylene in the presence of $AlCl_3$, HF, H_2SO_4, and a phosphate catalyst. In the alkylation over $AlCl_3$ the diisopropylbenzene fraction contains only two isomers - 1,3 and 1,4 - diisopropylbenzene, with the predominance of the former; the triisopropylbenzene fraction of the alkylate consists of 1,3,5 - triisopropylbenzene. When alkylating with HF and H_2SO_4, the diisopropylbenzene fraction contains all the three isomers with the predominance in approximately equal amounts of 1,3 and 1,4 isomers, whilst the main product of the triisopropylbenzene fraction is

Card 2/3

S/768/60/000/004/002/004
I060/I242

Orientation of isopropyl...

1,2,4 - triisopropylbenzene. The diisopropylbenzene fraction obtained with phosphate catalyst contains all the three isomers, the 1,3 - isomer being predominant. Through action of $AlCl_3$ on mono- and diisopropylbenzenes an equilibrium solution is formed of isomers in the diisopropylbenzene fraction in which the proportion between the 1,3 and the 1,4 isomers is three to one. The triisopropylbenzene fraction consists of 1,3,5 - triisopropylbenzene. Unlike the mono- and diisopropylbenzenes, symmetrical triisopropylbenzene does not undergo dealkylation in the presence of small amounts of $AlCl_3$. When alkylating with $AlCl_3$, a composition in equilibrium is formed only when alkylbenzenes differ in the number of alkyl groups. No equilibrium solution of isomers of diisopropylbenzene has been obtained. There are 5 tables. The most important English-language reference is A.W. Francis, Chem.Rev.,(1948),43,257.

Card 3/3

S/190/60/002/011/009/027
B004/B060

AUTHORS: Alekseyeva, I. A., Spasskiy, S. S.

TITLE: Copolymerization of Unsaturated Polyesters With Vinyl and Allyl Monomers. XII. Study of Copolymers of Polydiethylene Glycol Fumarate and Styrene by Infrared Spectroscopy and the Chemical Method

PERIODICAL: Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 11, pp. 1645 - 1654

TEXT: The authors report on a new method of determining double bonds in copolymers of unsaturated polyesters. The method is based on the determination of the ratio between the optical density of the bands of the groups whose content has changed due to copolymerization, on the one hand, and the optical density of the bands of the groups whose content has remained unchanged, on the other. The method is thus independent of the thickness of the irradiated sample. The copolymerization of polydiethylene glycol fumarate (PDEOF) with styrene was studied. The infrared spectrum (Fig. 1a, 1b) revealed that in the copolymer the optical density of the

Card 1/6

1651 cm^{-1} absorption band of the -CH=CH group has changed as against the spectrum of PDEGF. The 705 cm^{-1} band of the benzene ring was also identified. The calculation of nonreacting double bonds by various methods yielded the following values:

Table 2

Method	Number of nonreacting double bonds of the polyester converted into copolymer, %
Change in the optical density of the band for double bond	45±2
Content of unsaturated acids in the sulfuric hydrolyzate	47±2
Yield of polymer separated from the sulfuric hydrolyzate	59±5
Change in the specific volume	58±5

Card 2/6

The last two data are said to be little probable, as their determination error is too large. The styrene content in the copolymer was found to be ~ 5% by means of infrared spectroscopy (an IKS-12 (IKS-12) recording spectrophotometer was used). Elementary microanalysis yielded 13%, and the oxygen content determination 12%. The number of double bonds was determined by the chemical method of I. I. Ioffe (Ref. 12): hydrolysis by means of concentrated H_2SO_4, after two days addition of 0.1 N $KMnO_4$ and KI, and titration of free fumaric acid with 0.1 N thiosulfate. Ioffe's calculations had to be corrected, however, because diethylene glycol also uses up some $KMnO_4$ (0.01 g diethylene glycol = 0.39 ml thiosulfate). On dilution of the hydrolyzed copolymer some polymer was precipitated, the infrared spectrum of which was likewise taken (Fig. 1c), and which was compared with a standard mixture of 56% dimethyl malonate and 44% ethyl benzene (Fig. 1d). Based on the spectroscopic analysis, the styrene content of this polymer was 35%, in agreement with the chemical analysis. In this product, 1.7 fumaric acid molecules fall to one styrene molecule.

Copolymerization of Unsaturated Polyesters With Vinyl- and Allyl Monomers. XII. Study of Copolymers of Polydiethylene Glycol Fumarate and Styrene by Infrared Spectroscopy and the Chemical Method

S/190/60/002/011/009/027
B004/B060

According to this, the fumaric groups of PDEGF react not only with styrene but also among one another. The suggested spectroscopic method gave more accurate results than methods used before. The authors thank T. V. Molchanova and G. A. Semerneva for their assistance in the analyses. There are 2 figures, 4 tables and 12 references: 7 Soviet, 2 US, 1 British, and 2 German.

ASSOCIATION: Institut khimii Ural'skogo filiala AN SSSR (Institute of Chemistry of the Ural Branch of AS USSR)

SUBMITTED: May 3, 1960

Card 4/6

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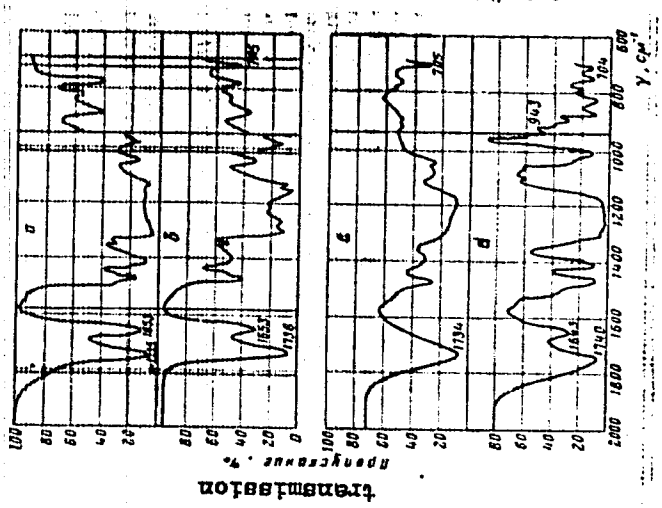

Card 5/6

(Legend to) Fig. 1 Infrared spectra of
a) polydiethylene glycol fumarate, b) copolymer from polydiethylene glycol fumarate and styrene, c) copolymer product of sulfuric acid hydrolysis, d) mixture of 56% diethyl maleate and 44% ethyl benzene

Card 6/6

PLYUSNIN, V.G.; ALEKSEYEVA, I.A.; BABIN, Ye.P.

Orientation of isopropyl groups in a benzene ring during alkylation by propylene catalyzed by $AlCl_3$, HF, H_2SO_4. Trudy Inst.khim. UFAN SSSR no.4:49-58 '60. (MIRA 16:6)
(Benzene) (Propene) (Isopropyl group)

ALEKSEYEVA, I.A., SEMENOVA, G.A.

Raman spectra of phenol and cresols and a quantitative analysis of mixtures of the two. Izv.Sib.otd.AN SSSR no.7:79-82 '60.
(MIRA 13:8)

1. Ural'skiy filial AN SSSR.
(Phenol—Spectra) (Cresol—Spectra)

BABIN, Ye.P.; PLYUSNIN, V.G., ALEKSEYEVA, I.A.

Kinetics of the formation of alkylbenzene isomers during the alkylation process. Izv.Sib.otd.AN SSSR no.8:75-83 '60.
(MIRA 13:9)

1. Ural'skiy filial AN SSSR.
(Benzene) (Alkylation)

5.3300,5.1190

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SOV/79-30-2-16/78

AUTHORS: Babin, Ye. P., Plyusnin, V. G. , Alekseyeva, I. A., Nasakina, M. I., Alekseyeva, G. A.

TITLE: Dealkylation of Polyalkylbenzenes in the Presence of Aluminum Chloride

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 2, pp 430-435 (USSR)

ABSTRACT: The effect of temperature on the composition of final products of dealkylation of polyisopropylbenzenes (over $AlCl_3$) is reported in this paper. Dealkylation experiments were performed at 20, 40, 60, and 80° in a three-neck round-bottom flask, provided with a spiral stirrer, reflux condenser, and a bubbler for introducing dry hydrogen chloride. 0.27 moles of $AlCl_3$ was used for every mole of alkylbenzene. Reaction time: 6 hours. The two layers, the upper a hydrocarbon and the lower a catalyst phase, were separated, washed with ice water,

Card 1/-

dilute HCl and again with water, and then fractionated. The analytical results show that: (1) In the dealkylation of monoisopropylbenzene, raising of temperature lowers the content of monoisopropylbenzene in the hydrocarbon layer (from 19.3% at 20° to 8.7% at 80°), while the content of benzene increases in both the hydrocarbon and (more so) in the catalyst layer. The rise in temperature also increases the ratio of the layers catalyst/hydrocarbon (from 1.8 at 20° to 3.6 at 80°) due to an increase in concentration of di- and triisopropylbenzenes (and of the polymeric products formed in the reaction) in the catalyst phase. (2) In case of diisopropylbenzene, a rise in temperature causes an increase in concentration of benzene, mono- and triisopropylbenzene, and also an increase of diisopropylbenzene in the hydrocarbon layer. Such apparent inconsistency is explained by increasing dealkylation of triisopropylbenzene (concentration of the latter in the catalyst layer decreases with rising temperature) which is formed during the process.

Dealkylation of Polyalkylbenzenes in the Presence of Aluminum Chloride

77665
SOV/79-30-2-16/78

(3) Dealkylation of triisopropylbenzene results in formation of benzene, mono- and diisopropylbenzene, the concentration of which increases with increasing temperature. The catalyst phases of the polyisopropylbenzenes contain a considerable quantity of unsaturated hydrocarbons, which increases with rising temperature. As in the case of mono- and diisopropylbenzenes, alkylation of triisopropylbenzene results in formation of polymerization products, the concentration of which increases with rising temperature. Comparing the investigated polyisopropylbenzenes, triisopropylbenzene is the most stable, while the mono-derivative is least stable in regard to dealkylation in the presence of aluminum chloride. Isomeric di- and triisopropylbenzenes were analyzed by taking their Raman spectra (taken on the ISP-51 spectrograph and measured with IZA-2 microscope and MF-2 microphotometer). The rise in temperature causes slight changes in meta- to para-isomer ratio (4-fold rise in temperature causes a 6% decrease in concentration of para-diisopropylbenzene, due to

Card 3/4

Dealkylation of Polyalkylbenzenes in the Presence of Aluminum Chloride

77865
SOV/79-30-2-16/78

conversion into the meta-isomer). The triisopropylbenzene fractions obtained in all experiments contained only 1,3,5-triisopropylbenzene. There are 6 tables; and 20 references, 9 Soviet, 7 German, 1 Japanese, 2 U.S., 1 French. The U.S. references are: Norris, Rubinstein, J. Am. Chem. Soc., 61, 1167 (1938); H. Gilman, R. M. Meals, J. Org. Chem., 8, 126 (1943).

ASSOCIATION: Ural Branch of the Academy of Sciences, USSR (Ural'skiy filial Akademii nauk SSSR)

SUBMITTED: February 9, 1959

Card 4/4

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5.3100

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S/076/60/034/04/04/042
B010/B009

AUTHORS: Alekseyeva, I. A., Plyusnin, V. G., Babin, Ye. P., Alekseyeva, G.A. (Sverdlovsk)

TITLE: Laws Governing the Substitution of Alkyl Groups for the Hydrogen Atoms in the Benzene Ring. VIII. Orientation of the Alkyl Groups in the Catalytic Alkylation of Benzene With Acid Catalysts

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 4, pp. 726-733

TEXT: The investigation results quoted in various publications concerning the compositions of di- and polyalkyl benzenes (obtained with various catalysts) show that a higher percentage of 1,3-dialkylbenzenes may, for instance, be obtained by means of $AlCl_3$ and $FeCl_3$. Since alkyl groups preferably attach to the 1,2- and 1,4-positions in the aromatic ring, this is an "abnormal" phenomenon, which has not yet been explained. In the present paper benzene and isopropylbenzene were alkylated with propylene on kieselguhr in the presence of $AlCl_3$, HF, H_2SO_4, and H_3PO_4. The working methods have already been described (Refs. 11, 12), working conditions are given in Table 1. The catalysates were

Card 1/3

80224

Laws Governing the Substitution of Alkyl Groups for the Hydrogen Atoms in the Benzene Ring. VIII. Orientation of the Alkyl Groups in the Catalytic Alkylation of Benzene With Acid Catalysts

S/076/60/034/04/04/042
B010/B009

fractionated in narrow fractions whose Raman spectra were investigated by means of an ISP-51 spectrograph (Tables 2,3, results). The spectra of the mono- and diisopropylbenzenes were determined by means of the spectra of pure compounds (produced by the Komissiya po spektroskopii Akademii nauk SSSR (Commission of Spectroscopy of the Academy of Sciences USSR)). The diisopropylbenzene fraction of the catalyzate obtained by means of $AlCl_3$ contained, under the particular experimental conditions, the two isomers 1,3- and 1,4-diisopropylbenzene, the former being produced in larger quantities than the latter. Three isomers are obtained with the catalysts HF and H_2SO_4, namely almost equal amounts of the 1,3- and 1,4-isomers and much less of the 1,2-isomer. The catalyzate obtained with the phosphorus catalyst also contained all three isomers (predominantly 1,3-diisopropylbenzene). It was found that in the course of the dealkylation of the mono- and diisopropylbenzenes an equilibrium of the isomers in the diisopropyl fraction comes about in accordance with the ratio 1,3-isomer : 1,4-isomer = 3 : 1. With $AlCl_3$ only 1,3,5-triisopropylbenzene forms, while the main reaction product in the case of HF and H_2SO_4 is

Card 2/3

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Laws Governing the Substitution of Alkyl Groups for the Hydrogen Atoms in the Benzene Ring. VIII. Orientation of the Alkyl Groups in the Catalytic Alkylation of Benzene With Acid Catalysts

S/076/60/034/04/04/042
B010/B009

1,2,4-triisopropylbenzene. For the first time, the Raman spectra of the 1,3,5- and 1,2,4-triisopropylbenzenes are given. They are, however, only tentative qualitative data since the purity of the substances obtained did not yet meet standard requirements. Papers by A. V. Topchiyev and P.G.Sergeyev are mentioned in the text. There are 3 tables and 17 references, 9 of which are Soviet.

ASSOCIATION: Ural'skiy filial AN SSSR Institut khimii (Urals Branch of the AS USSR Institute of Chemistry)

SUBMITTED: April 25, 1957

Card 3/3

ALEKSEYEVA, I.A.; SEMERNEVA, G.A.; SPASSKIY, S.S.; Prinimala uchastiye . .
ZAMARINA, L.A.

Copolymerization of unsaturated polyesters with vinyl and allyl monomers. Part 15: Polydiethylene glycol fumarate polymer studied by means of infrared spectroscopy and by chemical methods. Vysokom.soed. 5 no.9:1297-1302 S '63. (MIRA 17:1)

1. Institut khimii Ural'skogo filiala AN SSSR.